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ABSTRACT

This report covers the current situation and general trends in correspondence study in France and describes two public institutions involved in it: Centre National de Tele-Enseignement and Radio-Television Scolaire. The evolution of correspondence study has been linked with the development of permanent education and the parallel transformation of correspondence study is calling increasingly upon audiovisual aids and teaching machines. Individual home study is now combining with various types of localized group instruction, in particular, using television assisted teaching. The Centre National de Tele-Enseignement provides instruction by the traditional medium of correspondence courses but supplements this with more up-to-date techniques. Radio-Television Scolaire, originally implemented for elementary and secondary education, is now enlarging its scope to include courses for adult home study, either with, or without, supporting study materials. (Appendixes include the experience of the Centre Universitaire de Cooperation Economique et Sociale and general documentation on the Centre National de Tele-Enseignement.) (NL)

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CORRESPONDENCE EDUCATION

FRANCE

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STRASBOURG - 1968

REPORT

CORRESPONDENCE TUITION IN FRANCE
(in connection with other media)

AND THE DEVELOPMENT OF PERMANENT EDUCATION

by Louis CROS
Inspecteur Général de l'Instruction Publique

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INTRODUCTION

In accordance with suggestions from the Committee for Out-of-School Education of the Council for Cultural Co-operation, this report is prepared in two parts:

1. Part One deals with the current situation and trends in correspondence tuition; it also emphasises the latter's evolution which is linked with the development of "permanent education". Additionally, it brings attention to the parallel transformation of the concept of "correspondence" tuition itself which is calling increasingly upon other media. Audio-visual aids and teaching machines are now complementing the written medium. Individual home study is now combining, moreover, with various types of localised group instruction (in particular, using the method of television assisted tuition).

2. Part Two looks at two examples of public institutions for correspondence tuition or home study; The "Centre National de Tele-Enseignement" provides instruction by the traditional medium of correspondence courses, but supplements this with more up-to-date techniques; the other body, the "Radio-Television Scolaire" is a more recent example of adult home study, specially adapted to meet new requirements, but which, in certain respects, is still at the experimental stage.

In view of the wide range of private correspondence institutions (over which the government has no supervision at present), it is impossible to describe any one of these as typifying the entire category.

PART ONE

CURRENT SITUATION AND GENERAL TRENDS IN CORRESPONDENCE TUITION

(in connection with other media)

1.1. - THE EVOLUTION OF NEEDS

1.1.1. - Global estimate of current students

There are no official statistics on the total number of children, adolescents and adults, taking state-sponsored or private correspondence courses. As there is no state supervision at present of private correspondence course institutions, the number of students enrolled there has never been officially verified.

Although no precise data are available, one can estimate the total number of correspondence course students (children, adolescents and adults) at around 500,000. However, these enrolment figures doubtless reflect highly varying degrees of industriousness and efficiency. This is a heterogeneous mass with age groups ranging from the very young to the mature adult, with levels from elementary school to that of graduate engineer, and with a degree of effort from an occasional few hours to full-time study. Generally speaking, all those unable to pursue a traditional course of education because of sickness, distance or living conditions, are actual or potential "customers" of this type of education. There are certain clearly definable categories latent within this mass.

1.1.2. - School-age students

The first group to stand out is that of school-age students, who are either house-bound or compelled to undergo a type of medical treatment, incompatible with a normal school life (the sick, crippled, mental defective, etc...). In such cases, only through a form of home study can the individual adapt flexibly his conditions and pattern of study.

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This category also covers children of school age, who do not have access to normal educational establishments. These include:

- French children residing outside of France;
- bargee or fairground "itinerant" children, etc...;
- children following special studies, in particular, children and adolescents taking up music or art in depth; this implies their adhering to a time table which is incompatible with that of normal educational establishments;
- the product of family or social circumstances: e.g. a student, forced to earn his living, yet, who plans to complete his secondary or technical education; very young married couples; a young girl, who must bring up orphaned brothers or sisters, or look after crippled or sick parents; children living in the country, who cannot adapt to boarding school conditions; young prisoners or delinquents, etc.;
- finally, children, who cannot attend a normal school, for reasons of distance or academic failure (but who can improve under the more elastic and individualised conditions of home study).

To these categories, should be added students, who, whilst following normal courses of study, must concurrently take reorientation or supplementary courses. This is the case, for example, with students, who have changed their branch of study and, who need to fill certain gaps in their knowledge, or to study certain subjects which were not included in their previous programme. It is also the case of students, who change schools and must study a language which was not taught at their previous school.

1.1.3. - "Out-of-school" students and graduates

This second group covers:

- apprentices in commerce, industry and the crafts, who, in accordance with apprenticeship legislation, must take a supplementary course of theoretical and practical vocational training. In a number of companies, the theory is taught by correspondence;

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- young people, who, after leaving school, feel a need to "round off" their basic, general education. This is the case, for example, of national service conscripts, who take supplementary correspondence and radio courses during their military service; included here are also "after-school" foreign language programmes, followed at home with the help of records;

- students, who earn their living, whilst continuing their studies; those, who for lack of funds, or any other reason, cannot live in a university town, as well as students, who manage to attend tutorials, but not the main courses;

- young people, who, after completing school or university studies, prepare to take a professional qualification or a public or private competitive examination. Preparing for this may entail a supplementary, general course of training as well as vocation-orientated courses.

  This latter category of student is to be found to a great extent in the countryside and in the smaller towns.

1.1.4. - Adults

The third group consists essentially of working adults, who, through study courses at home or at work, attempt to:

- further their general and technical knowledge, which they need to move ahead in their jobs (vocational advancement);

- revise and bring up to date knowledge, needed to carry out their jobs (retraining);

- obtain additional general and technical training for reorientation purposes (job reconversion). This category includes the victims of illness or physical disability, who have reached adulthood, and who need vocational retraining.

One should also add the growing number of adults, who desire further education in order to improve their general knowledge and culture, who are concerned with personal improvement and its social significance, without this having anything directly to do with their jobs.

1.1.5. - The increase in school-age students

The various groups in this category are all in a growth situation, but at different rates.

The number of school-age correspondence course students has increased considerably since the war, more or less in proportion to the general growth in student numbers of school-age (especially at secondary school level).

To the extent that these students consist of the sick, crippled or the children of parents residing outside France, and the remainder succeed in finding (and will do so increasingly) a school within reach of their homes which meets their requirements, this category is reaching its ceiling of 80.000 - 100,000 students. At best, further increases will be conditioned by fluctuations in the birth rate.

However, another factor may arise: the need for partial correspondence instruction (to be more precise tele-guided study) which would be linked with a programme of normal school education, but which would supplement the latter in certain subjects (e.g. languages) or with regard to certain types of class work (programmed instruction could be substituted for certain repetitive exercises). This point will be examined later on (cf. 1.3.).

1.1.6. - The growth of "out-of-school" students and graduates

The increase in numbers of "out-of-school" students and graduates which has been considerable during the last few years, can be explained, on the one hand, by the fact that more than 200,000 children reach adolescence each year (the first large post-war generation was 16 years old in 1962), and, on the other hand, by the fact that they are entering a completely changing labour market: agricultural employment is declining rapidly; in industry, manual routine work is being replaced progressively by jobs, involving additional qualifications; the public services sector is expanding, particularly in the administrative, commercial and social fields, etc. (1)

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(1) It is anticipated that by 1985, 10 million French workers will be employed in public services (i.e. almost 50% of the working population) as against 9 million in industry and 2.4 million in agriculture.

One only has to peruse the prospectuses and advertisements to see the importance of correspondence courses in subjects such as electricity, electronics and technical design; even more attention is given to secretarial courses, advertising and bookkeeping, to preparing for administrative or technical open examinations, to the newer professions from social worker to air hostess, etc.

Most "out-of-school" students have, until now, been interested only in receiving additional theoretical and technical training which is required when they begin work. These will increase in number as the technical and public services sectors expand. To this group must be added students who require a preliminary additional general course of instruction which they were unable to obtain at school. Because of these twin factors, it would certainly be reasonable to calculate the annual increase of home study participants at several hundred thousand.

1.1.7. - The growth of correspondence tuition for adults: Socio-economic needs

The above figures are significant if we reflect that at the beginning of this century in France, there were no more than 10,000 students enrolled in the entire state technical education system. These figures are, however, low if we consider the number of adults of all levels, for whom educational courses must be organised at the present time. About twelve years ago, a cautious estimate of the "Institut Pedagogique National" gave a figure of 1,500,000 adults as the number of potential students of "vocational advancement" correspondence courses. Today a similar estimate would probably produce a much higher figure.

This type of education is (and will continue to be) all the more in demand, as it is effective, and inexpensive, not merely for tuition in administrative, commercial and social subjects, but also for theoretical training in the scientific and industrial fields, especially when it is provided in conjunction with supplementary courses of practical training (this point will be examined later). Economists, sociologists and industrialists are unanimous that what is lacking today is less the kind of practical and specialised "on-the-spot" training, than the basic theoretical instruction and the ability to adjust which can only be developed by an adequate level of general education.

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Recent statistics show that 52% of French workers have no school leaving certificate; 12% have a diploma equivalent to or higher than the school leaving certificate (brevet élémentaire), and 3% have a diploma of baccalaureat level. According to the magazine "Entreprise", in the metal industry, for example, "60% of foremen and 75% of skilled chargehands have no diploma. The situation is no better in the other sectors". The magazine also notes: "This lack of basic knowledge is a serious obstacle to the economy's progress. The development of any company requires a growing number of technically trained men. Can one be certain today that enough candidates can be found with an adequate general education for them to be rated as technically qualified? Nothing is less certain. Therefore, many posts are not created as they cannot be filled".

The author of this enquiry (1) stresses: "The obstacle to internal promotion, which is, however, so vital, is the notorious poor grasp of French and of foreign languages, ignorance of work methods and the principles of economic organisation, an inadequate, basic, literary and scientific education which, alone, enables the individual to adapt rapidly to new methods of production, business or management. Whoever hopes to be employed as a technically skilled worker in the electrical industry, cannot ignore the principles of physics...". Correspondence tuition can contribute effectively to providing this type of education for all managerial personnel in the economy, who lack it at present, and who will do so increasingly in the future.

1.1.8. - The growth of correspondence tuition for adults: Socio-cultural needs

This situation affects not only qualified personnel in industry and young people, but indeed the adult population as a whole, workers and management, employed and non-employed.

During the last fifteen years (and prior to any official raising of the compulsory school leaving age), the number of secondary school pupils has increased four or five times. During the same period, however, there have been no changes in the basic education of the remaining eight or nine tenths of the population. The compulsory elementary school leaving age was certainly raised in 1936 to 14, but this measure produced poor results. Now it has been further extended to 16, and under completely different conditions. In a population, whose life-span is now 70, it will take about another 30 years before more than one out of every two Frenchmen will have received an education of this kind.

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(1) Michel DRANCOURT

It is clear that in our age of computers, television and intercontinental missiles, their basic education cannot remain the type of elementary instruction, conceived in the 19th century for a nation that was composed mainly of peasants and artisans. Education and culture are relative concepts. A nation of peasants and artisans, able to read and write, is an educated people; for it obtains its knowledge, in addition, through daily and continual contact with nature and with its own crafts. The gregarious people of an urban and technological civilisation which has lost this contact and which can only read and write, might well be considered inferior both mentally and morally. The relations between the generations even within the family, the relationships of the various social environments, the problems of everyday life in a complex civilisation, the new opportunities for travel, contacts and information, all these factors converge to create a need for intellectual development which is in keeping with increased material standards.

This latent need is tremendous. The expressed need is reflected in the form of gaps in knowledge which must be filled, of basic knowledge that is lacking at the moment when a need is felt for vocational training or refresher courses.

However, this need is neither necessarily nor exclusively linked to vocational requirements. A female "student" (whose faltering words are reproduced here) writes: "I am 70 years old and I was never able to attend school; there was too much work to do. Now I have lost my husband; it is impossible to describe my loneliness. I dare not write to my friends. Could I learn a little spelling?" Isn't this touching statement as significant as it is moving?

In this field, the increase in students of specialised correspondence tuition establishments, both public and private, gives a very incomplete picture of the evolution of requirements. All mass communications media, especially radio and television, are being and will increasingly be brought into use (see paras. 1.2.4., 2.2.6., and 2.2.7.).

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1.2. - THE VARIOUS TYPES OF EDUCATIONAL ESTABLISHMENTS

1.2.1. - Public and private correspondence tuition

Correspondence tuition in France like school and university tuition, is characterised by the existence of an important public system, directly responsible to the state, side by side with a private system which is completely independent (although state supervision is now being considered).

1.2.2. - State sponsored correspondence tuition and its newest developments

State sponsored correspondence tuition arrived rather late on the scene. The authorities concerned, who were attached to traditional forms of education, showed little interest until World War II in supporting what seemed to them to be a poor substitute.

In France, pressure of circumstances - the closing of certain public and private schools - produced in 1939 a state correspondence course school. At the time, it was thought that this school would meet a temporary need, and that its existence would be ephemeral. The authorities were quick to notice that not only was the demand of a permanent nature, but also that it was increasing rapidly, and evolving as it did so. Altogether, around 160,000 students participate in state sponsored correspondence tuition in the strict sense of the word, i.e. in its traditional form. However, one should add to this figure:

- participants in radio and television courses. These should be included within the public system, since radio and television in France is a public service (see para. 2.2.);
- adults students, especially in companies, taking courses under the new methods of "on-the-spot teaching" (utilising teachers from within the company itself) which are a combination of state action and private initiative (see para. 1.2.7.).

There are two other types of state correspondence course establishment:

(a) Those organised by certain public services, aimed at supplementing the normal educational programmes. In addition to those sponsored by the Ministry of National Education, certain correspondence training courses are provided under the aegis of the Ministries of Agriculture and of Public Health; others are available for preparing by correspondence for various competitive examinations. Also within this category come university sponsored courses by radio which are supervised by the Ministry of National Education.

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(b) Other state sponsored correspondence courses are provided by bodies which are entrusted with this specific task. These are the "Centre National de Télé-Enseignement" and certain regional centres which constitute extensions of the former. Their operation will be examined in Part Two of this report. Approximately 140,000 students take courses through these bodies, of whom 80,000 participate through the "Centre National".

1.2.3. - Private correspondence tuition

The Guide to National Private Education (Guide national de l'enseignement privé) lists almost 300 correspondence schools and courses; it is estimated very approximately that 300,000 students take such tuition.

The term "private correspondence tuition" is applied to three types of organisation:

- Private denominational education: There are very few correspondence establishments of this type.
- Tuition provided by trades/professions: This is often a means of ensuring that apprentices take the compulsory vocation courses established by apprenticeship legislation. These include correspondence courses set up by the Vocational Association of Chambers of Trades, the Central Co-ordinating Committee for Building Trade Apprentices, certain "département" agricultural associations, etc. Other companies or company unions provided courses connected with work advancement, for example: vocational training courses arranged by the chemical industry, by the National Union of Telephonic Equipment, by the Union Chamber of Automobile Repairs, by the banking profession, etc.
- Private commercially orientated establishments: These are of varying importance; some courses have only thirty or forty students; certain such schools have tens of thousands enrolled students.

Among these commercially slanted courses, there are a number which may be considered perfectly reputable and effective, and which have the highest reputation. Others are less reputable, and current educational legislation does not protect the public adequately against certain forms of misleading publicity and canvassing which have incited numerous protests. To overcome this situation, a number of institutions have attempted to establish

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a code of ethics. Moreover, ways are now being studied of strengthening state supervision of the quality of educational courses by statutory or legislative means.

1.2.4. - Development of the concept of correspondence tuition

This search for suitable statutory or legislative protection has led to an examination into the nature of what is traditionally termed "correspondence" tuition or "home study" and to an attempt to give this concept a precise legal definition.

In so doing, researchers found that we are being more and more confronted with a number of new educational and didactic methods of operation which link various categories of documentation, information and teaching practice. It would appear that three conditions must be satisfied, if these categories are to merit the term education:

(a) study materials must be provided, covering the subject being studied; they must be well-ordered and progressive and adapted to the student's level;

(b) the materials must be accompanied by a study plan, containing exercises for practice and a marking system which not only acts as a check on the work done, but also includes advice and explanations - a real dialogue between teacher and student;

(c) especially in the case of vocational training, the home study theory must be supplemented where necessary by practical on-the-spot training; such training may be assigned to other organisations (companies, technical colleges), but must be co-ordinated with the theoretical study.

In other words, a two-fold expanded concept is replacing the traditional idea of "correspondence" tuition:

- long-distance study (or tele-guided instruction) which involves both written and reading material (using text-books and course-books) as well as the aural and visual approach (radio and television) and which may comprise conversational exchange (use of magnetic tapes, spoken corrections);

- home study which combines instruction supervised by an unseen tutor with on-the-spot training by a teacher who maintains direct contact with the student.

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1.2.5. - Long-distance tuition and mass communications

The use of mass educational media, especially of radio and television, has made "long-distance" tuition an essential tool of "permanent education" both from a vocational and cultural point of view.

There is here a big difference between the diffused use of such media which radio and television try to ensure within the context of a general "educational mission" (which they link with missions of an informative and recreational nature) and their systematic use which involves analysis of content as well as progression, supervision, association and other methods.

The most striking French experiments are the "Télé-CNAM" (advanced work promotion courses), "Télé-Promotion Ouest" (the "rural sector" is now operating; the "managerial/skilled personnel sector" is at the planning stage), the post-graduate retraining programmes for doctors, the ORTF vocational training courses, the various "radio universities" and finally "Radio-Télévision Scolaire" which we shall examine in detail in para. 2.2.

1.2.6. - Combining long-distance with on-the-spot tuition

Three operations are being introduced: at home itself, at the place of work, and at local centres, where students gather periodically. Naturally these three different approaches may be combined in various ways.

A. The home study programme is applied in the case of persons, completely unable to travel because of sickness or physical disability (especially children of school-age). It assumes various forms:

- Individual private lessons at home are given by local teachers, appointed by the home study establishment. These lessons play a subordinate role and supplement the main instruction provided by correspondence, radio and television. The local teacher helps to fill in gaps which are inevitable in an education which illness has frequently made irregular. He smooths out difficulties which are a matter of course for normal pupils, but which would be insuperable and discouraging for the sick or physically disabled if they could only draw upon the written advice of an unseen tutor. Sometimes, the local teacher limits his activities to the above described vital tasks; sometimes, the courses, printed and other material and work programmes are sent to him by the institution. He adapts them to each individual case, he may select the exercises himself and correct them. The degree of initiative allowed the local teacher will vary according to the level of the tuition, the number and specialised nature of the subjects involved.

- The local teacher, moreover, may undertake to reinforce motivations by widening social contacts and group interest in bringing together his physically incapacitated pupils or students and others of the same academic level (the latter visiting the former). Intellectual development and often recovery in persons, suffering sometimes since very early childhood from serious illnesses or disabilities, are frequently inhibited or prevented by feelings of inferiority and isolation. By organising contacts with others, and allowing the sick the possibility of identifying with the others, this mental block disappears. When they realise that the sick and/or disabled - like the others - can overcome the same problems, can produce the same results as normal pupils or students, the most unfortunate accept their fates, build up an existence with its own pleasures and prepare to live a life, diminished physically, but not psychologically.

- This private tuition may sometimes be given on a group basis; in hospitals or sanatoria it may be a full course of complementary instruction. There are many examples of public and private initiative in this field which could be mentioned, including the educational courses organised at the centres of the National Foundation of Student Sanatoria, or those provided for persons suffering from neural-muscular diseases, especially infantile paralysis, in certain special hospitals, for example, at Garches. In such circumstances, various forms of co-operation between "long-distance" tuition and on-the-spot instruction are combined (cf. Part 2).

B. Instruction at place of work applies of course to young or adult workers engaged in or preparing for a specific vocation. It allows the requirements of theoretical training and of practical apprenticeship to be reconciled, the former being provided by correspondence, the latter at work by skilled personnel from the company or - in the case of the liberal professions or craftsmen - through periodic training courses.

However, in order for this type of tuition to be effective, on-the-spot training and home study must be co-ordinated and combined in a progressive programme; the theoretical training must be based on practical experimental work; theoretical knowledge must be utilised and justified. This presupposes, between the personnel charged with practical apprenticeship courses and the teachers of theoretical material, a functional liaison and

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common approach which can only result from periodic consultations. This is particularly the case at the levels of adult education (social advancement) or retraining programmes, and even more so at the more advanced level (skilled employees, technicians, engineers), where there is both a vital and urgent need to develop the basic theoretical training of a large number of specialist and managerial staff. Here particularly, an educational programme can prove effective on a large scale only if it is rooted in the personal practical and specialised experience of those participating (see para. 1.1.7.).

C. Group education centres. These are set up either by inter-company agreement, by socio-cultural associations or by the state through its education authorities. This type of educational organisation is just beginning to develop (but as yet on an insufficiently large scale).

Sometimes, the tuition provided by the correspondence course establishment is planned independently of the supplementary theoretical or practical training which is given at such centres. Study sessions in these cases are of the group study type. The students are helped in their work, but the locally appointed tutors do not interfere with the working relationship between students and correspondence course teachers.

Sometimes, the supplementary training courses given during on-the-spot group sessions (especially experiments or practical training) are provided for in the correspondence course, but are organised independently of it on the initiative of the local instructors. Together, the locally appointed teachers or tutors advise their students on the theoretical material of the correspondence course, on the same basis as in the preceding example.

Finally, the local centre may be very active as an intermediary between the correspondence course establishment and a group of students. Course materials and literature are sent to the centre which itself undertakes to supervise the students' work. The banking profession has organised a technical training course of this type with 25,000 participating students. Work sessions common to various professions are also feasible, especially with the co-operation of a local teaching establishment: this has been the case with group sessions arranged at technical colleges for students of the "Centre National de Télé-Enseignement" (see para. 2.1.7).

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1.2.7. - "Tele-guided" tuition (the Nancy method)

For several years, the National Institute of Adult Training in Nancy (INFA) and the University Centre for Economic and Social Co-operation (CUCES) (1) - which supplements the INFA programme - have been experimenting with a particularly effective teaching method combining "tele-guided" tuition with practical oral instruction (either at work or at a group study centre).

The method consists of a link-up between the above institutions and the skilled staff from the companies themselves (or from cultural centres). Teachers are trained from the socio-vocational or socio-cultural environment concerned; in turn, these train other teachers, thus producing a geometrically progressive development. INFA and CUCES do not work directly with the students, but function via the assisted instruction of these teachers. The initial training of teachers taken from among the skilled staff of a company is carried out through courses, arranged within the company itself. The assisted instruction implies preparing the literature and exercises, necessary for the tuition. The Centre at Nancy undertakes this task, but together with the staff of the company in question, who adapt the material to the psychology and personal experience of the students. A system of correcting and checking one's own work allows the students themselves to evaluate their results. Programme amendments are made and clarification of any points is given at periodic meetings between the Nancy specialists and the teachers.

In his own words, Mr. SCHWARZ, Director of INFA, gives us a specific example of this method:

> "Having received a request from a company to train its engineers in statistics, the Nancy Centre took the following four successive measures:
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> (1) The Centre provided a course which was examined and adapted by a group of six engineers from the company already trained in statistics. There are three comments to be made here:
>
> - we looked for on-the-spot available 'talent', in this case, engineers with training in statistics;
> - for each set of sample exercises provided by the Centre which did not fall within their special field, the engineers tried to find a corresponding sample from within their own area. It was not their task to specialise the training, but to integrate the course with their actual work requirements;

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(1) See Appendix I.

- by reworking the course themselves, they were able - far better than any teacher could - to pinpoint the difficulties of their colleagues, as well as the right kind of language to use, and the best study rhythm to adopt.

(2) Training in group leadership was provided for these engineers to help them communicate the course material to their colleagues.

(3) Teaching was broken down into small work groups. The engineer instructors distributed the course for their colleagues throughout France, and once a month, for an entire day, students gathered under six group leaders in six different towns.

(4) The Nancy Centre evaluated the results and appraised the entire operation.

The above example shows what is meant by on-the-spot distribution. It assumes a certain degree of on-the-spot potential talent. In France, at least, this potential is amazingly prolific and we only have to look for it.

In addition, the students are taught in such a way as to learn to work on their own and check their own efforts.

The aim is to teach the students to evaluate themselves the results of their training. We, in fact, set the limits on this from the very outset; by results, we mean the extent to which information has been absorbed; we in no way imply evaluation of aptitude.

The solution we adopted was to use, at each work session, tests prepared in advance: these might be application tests, or tests on formulating conclusions, analogy tests, etc., then to correct them, to ask the students themselves to correct their tests, and finally to go over their corrections.

At each session, the teacher puts a question on the work of the previous meeting. The students answer this in written form. Then the teacher corrects the answers. The students are then requested to 'correct themselves' on the basis of the teacher's comments, to write on their papers how they feel they have done in the test. For example: 'I did the exercise well, but I drafted it badly', or 'I used a formula which is not applicable here', or 'I made a miscalculation', or 'My reasoning was faulty at that point', etc. The teacher collects the papers and corrects them, taking into account not merely the answer to the question but also the student's evaluation. For example:

A student answering a question calculating a machine's efficiency, had put the numerator in place of the denominator and vice versa. In his 'self-correction' the student noted that he had made a 'miscalculation'. The teacher had shown him that it was, in fact, more serious than this, and that to produce an efficiency of 350% was absurd.

The above method therefore trains them to evaluate their own work and to examine more closely the causes of shortcomings and errors. It is no longer the teacher who points them out, it is the student himself who seeks to understand what he has done."

1.3. - FUTURE PROSPECTS

1.3.1. - Converging technical and pedagogic developments

In the traditional view, correspondence course establishments, just as on-the-spot educational institutions, applied to a clearly defined number of students, enrolled in a specific academic course, itself extending over a given period, and (in France) sanctioned as a rule by a diplomas, examinations and competitive competitions. The courses, textbooks and study plans were conceived as an organic whole, each segment being of interest only in terms of the entire programme of the establishment and for the students themselves.

The new requirements of an educational system which has extended to include a considerable sector of the adult population - linked with the new methods represented by mass media, together with the new teaching techniques of programmed instruction and dynamic, methodological concepts - tend to be gradually changing this old approach. This is the case, moreover, with traditional educational institutions as well as for youth/adult correspondence course establishments.

(a) Formerly, education concurrently provided knowledge, stimulated individual study and encouraged group work, now correspondence and radio/TV courses have begun to split up these three aspects of pedagogic unity. Knowledge is supplied from afar, and often by sources other than the teacher; individual study is also "remotely" assisted; group instruction is carried out by "intermediaries". In other words, the means of learning available to a physically isolated student, taking home study courses are henceforth similar to those of a self-taught adult, who derives the supplementary training which he feels he needs, from whatever source he can, and on his own initiative. Both can now draw on sources of information which no longer depend exclusively on the teacher, sole distributor of knowledge, nor on the school, sole agency for disseminating learning.

(b) At the same time, the development of pedagogic ideas is promoting a parallel reconciliation of training methods. In place of an authoritative and abstract educational approach, it is tending to introduce more individual methods of study and the use of individually adapted materials. Even in the case of correspondence tuition, a "dynamic" concept of progression can help effectively, if the student is not only asked to answer a question or provide a solution, but is also stimulated to put questions himself, to react to a concrete situation, to adapt by using his imagination, in short, to conceive problems, not merely resolve them.

One can imagine didactic methods, still basically centred on the textbook and course content, being gradually replaced by a wider and more flexible use of public sources of information. A more autonomous study method will grow from the documentary and tangible base provided by such sources. The teacher, whose influence will become less direct, although no less essential, will be able to concentrate his attention on those students, who have most need of him; in each individual case, he will be able more readily to adapt his approach to their psychology.

There are countless public sources of information nowadays: textual and pictorial, books and posters, newspapers and newsreels, radio and television; these sources must be used, initially as a motivation factor.

1.3.2. - Information as a means of motivation

(a) Throughout youth and adulthood, vocational ambition is a deciding factor both in work and study. One of the key objectives - indirectly pedagogic - of mass media information (radio, television, cinema, press) could be to inform more fully those persons, willing to make an effort, of the possibilities available through various channels, and of the results which such efforts can achieve.

The role of such information would be determining in certain environments: for example, the farmers, 200,000 of whom (in France) leave the countryside annually, the rest of whom quickly need as intensive a general, economic and social education as possible; isolated workers who cannot find the incentives and information they need in a group vocational environment; housewives, who are very receptive to radio programmes during off-peak listening hours and through whom

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such information can reach their husbands, children and, indeed, many others.

(b) The feeling that study serves a useful purpose may be an equally decisive factor. Mass information can make us realise that learning is both useful and profitable, vocationally as well as in our practical, everyday activities, by showing how each course of study increases our abilities, to what extent it improves our way of life, allows us to solve everyday problems and to put our thinking in order, also to what extent we may make ourselves more useful as a result. (Cf. Part 2, point 2.3.).

(c) Information may additionally stimulate deeper study of scientific and technical subjects, if it handles popularisation of a subject intelligently. In this "motivating" role, information should be first of all captivating; it should appeal to the imagination as much as to the intellect; it should move more than instruct. Alexander DUMAS made more readers enjoy history (or Jules VERNE geography) by fictionalising it, than any learned and detailed history or geography course. It is in this field that audio-visual media, especially television, have created revolutionary possibilities with endless potential uses.

1.3.3. - Information as a documentary source

(a) Home study tuition - especially at adult level - will also need the support of a mass information programme which introduces the public to the main fields of knowledge. In addition to suitable radio/TV programmes, it would be ideal if a series of inexpensive booklets could be issued, simple in style, written by outstanding authorities, but free of any academic approach, which would not claim to explain everything, but would arouse curiosity and surprise. These booklets - just a few pages each in length - would describe in everyday language the range of human history and its great periods, the history of the Earth and the present structure of civilisation, the place of the Earth in the universe and how scientists regard the latter, how matter is investigated and energy used, the birth and evolution of life, how man and his society are themselves studied by scientists. These booklets would stimulate the reader and prepare the way for deeper study.

(b) Together with these introductory broadcasts (conceived as a point of departure, a first global approach to the main branches of learning), there would be no less need, at a higher level, for survey broadcasts conceived as a stage or an interim stock-taking. These broadcasts would offer persons with a wider educational

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background an approach, equally global in content, but more complex, of science and technology, of their progress and aspirations. They would inform the cultured individual, who simply wishes to be kept up to date; they would stimulate the specialist to revise his work.

(c) However, being passively informed is one thing. Actively profiting by it, is another. This requires another type of information, and above all a sedulous, steadfast and progressive effort that must also be guided and supervised. By its very nature, passive information, encountered in one's leisure time, is ephemeral: the broadcast is over and is erased from the mind; yesterday's newspaper is already forgotten; the book one bought to read on the journey is left behind on the luggage rack. Active information, which is to be retained and used in work, must also come in a more permanent form; it must be available and conveniently to hand. This requires corresponding personal study materials which can now be within the reach of everybody, even at the lowest end of the social scale.

1.3.4 - Personal study materials

Here, with the development of programmed instruction, we may expect to see (especially in the case of correspondence course tuition) the traditional type of study material gradually splitting up into three segments:

- study manuals (information possibly on flysheets or cards which may easily be stored away in one's own file or card index and brought up to date), prepared for reference not memorisation purposes, and to be kept on one's bookshelf as long as they are of any use;
- work "programmes" providing a step-by-step guide to the study of a given subject and which, like the study manuals, will apply to a single class or an entire course;
- audio-visual material to be co-ordinated wherever necessary with the work programmes (e.g. language records). Such material could be loaned out to the student, who does not need it constantly.

The manual plus certain audio-visual aids will constitute the personal and permanent study material. The work "programme", designed to guide and stimulate efforts, will be adapted to the student's level, whether young or adult, to his environment, whether academic or vocational, to the type of study he is pursuing, whether at an educational institution or at home. In

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the last case - which concerns us here -"programmes", based on the permanent material, suitably providing information, exercises and material for reflection and research on an appropriate progressive basis, plus the possibility of checking the results (with the help of educational aids, an on-the-spot clarification of one's mistakes might even be possible) will help the teacher much more than currently available textbooks, courses and study plans.

I.3.5. - The role of the teacher

The teacher's role, especially in adult education, will probably remain equally important, but will stick rather to essentials. His role will vary according to the age and self-reliance of the student.

(a) A good many adults will simply wish to keep themselves up to date with the aid of group media (mass media, vocational press, meetings, etc.). If such persons managed to acquire good study habits in their youth, they should need nothing beyond the above mentioned group media information and their own study materials. They will obtain, according to need, the courses and materials prepared by the correspondence course establishments without their having to enroll as regular students.

(b) Many others, who need to acquire new knowledge or extend what they already know, will require study guides. Apart from the above-mentioned "permanent" study materials, some of them will only need a suitably adapted "programme" in order to combine and make best use of available information plus their own experience, to understand more clearly the sequence of their studies and to remove any obtuseness from them, finally to turn the knowledge acquired into practical know-how. Such students really come into the category of auto-didacts.

(c) Finally, we have that group of students (young people and adults), who cannot be expected to ensure for themselves the continuity and supervision of tuition and training which they need. Such students will need not merely a study "programme", but also a teacher who will watch over their endeavours; in other words, they will require a regular liaison with a teaching establishment.

Relieved of the problem of providing extensive courses and detailed study plans by means of the programme, the "teaching machine" and the permanent study materials, the teacher will not have to supervise closely the learning of simple theories nor the step-by-step understanding of a new concept. Consequently, he will be able to concentrate on those educational activities which are the most difficult to programme: the initial global

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approach to a problem before proceeding to analytical exercises; stimulating work involving self-expression, synthesis of thought and personal creation as reflecting the student's personality, his own environment and his needs; exercises checking memory work, similar to essay tests; finally, communication between teacher and student which presupposes personal contact; in the case of home study, this implies a regular exchange of correspondence (or tape recorded contacts) in order to give constant support to a student's efforts, to help him overcome his difficulties and to triumph over despondency; in other words, this is the "tailor-made" aspect of education. (1)

The correspondence course institutions will, moreover, arrange the facet of group training which is most vital and irreplaceable: the social aspect of education. This promotes learning together by interchange, co-operation and competition among students, specified team work, exercises to develop the ability to communicate and oral expression, the exchange and widening of individual experience. The importance of this aspect cannot be over emphasised, especially for children and adolescents, but also for adults.

At times, the currently accepted form of communication between correspondence tuition teacher and student, i.e. written and direct, will prove to be the best solution; sometimes, the establishment in question will allow a greater degree of initiative to its local teachers and will entrust them with direct, scholastic supervision as well as the correcting of papers. Doubtless, intermediate arrangements will also be feasible. Here again, experience will be the deciding factor.

1.3.6. - The long-term outlook

Within the terms of this pedagogic development, home tuition, whether by correspondence, radio or television, will inevitably be integrated into the broader framework of educational supplies, which implies an overall organisational concept: problems of

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(1) Is it utopian to imagine that perfected telephonic communication (wired or wireless) will probably create a completely different set of conditions in the teacher-student relationship? This could range from direct contact (requests for information/oral advice) to switching into special circuits for language lessons, dictation or lectures (in the same way as for the Post Office "Talking Clock" or INF 1), at a time during the week or day convenient to the student; this would be a more flexible method than the use of educational radio.

personalised tuition, apprenticeship methods and programming techniques, preparing and disseminating information and study materials, the revision of school textbooks, etc.

The various media prepared by or for correspondence course establishments will become less specific in content as they are aimed increasingly at a wider public, where auto-didacts and students merge; by so doing, the media will improve. The educational help given by such establishments to their own students in written form, verbally or via the local teacher will on the other hand lose nothing of its specific value.

PART TWO

TWO PUBLIC ESTABLISHMENTS
for correspondence tuition
(in connection with other media)

2.1. - "CENTRE NATIONAL DE TELE-ENSEIGNEMENT"(CNTE)

2.1.1. - The establishment and development of the "Centre National"

Approximately twelve years ago, the name "Centre National de Télé-Enseignement" (CNTE) replaced the original designation "Centre National d'enseignement par correspondence et radio" in order to stress the convergence of the different home study methods.

The "Céntre National" was established in 1939. Originally, it was intended to be at "lycée" level and merely to meet the temporary needs resulting from the outbreak of war and the resultant uprooting of school children. From 1944 onwards, the Centre was clearly beginning to meet permanent and growing requirements. A technical correspondence institution, then primary classes and finally certain advanced courses were added. Then special courses for adults were established. The number of students at the Centre has increased from the thousand approximately enrolled when it was set up, to around 80,000; to this figure must be added approximately 60,000 students, enrolled in the regional centres, established in certain districts in order to decentralise the programmes.

This student body is distributed as follows, according to the reasons for enrollment:

Reason for enrollment	Percentage
Health	8 %
Residing too far from a school/college	16 %
Military service	9 %
Art studies additional to general studies	2 %
Supplementary education requirement	16.5%
Enrollment for courses, taken by persons who are full-time employed	48.5%
Total	100 %

Currently around 75% of these students are over 21 years of age.

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2.1.2. - Administrative structure

(a) The "Centre National" forms part of the "Institut Pédagogique National" in Paris. The regional correspondence tuition centres form part of the regional documentation centres for education which also come under the same institute, but which, however, enjoy a considerable degree of autonomy. Each centre handles student enrollments directly and collects the appropriate fees (limited, by the way, to costs of printing and distributing the course material; the education itself is free like primary and secondary state education). The cost of administrative staffs is covered with the help of an inclusive state subsidy. Full time teachers are assigned to the centres by the Ministry of Education; the state also pays their salaries. Within the limitations of the state subsidy, the centres themselves recruit part-time instructors.

(b) In addition to the main centre (at VANVES near Paris), there are currently five regional centres: GRENOBLE, LILLE, LYON, ROUEN and TOULOUSE.

- The GRENOBLE centre specialises in certain types of vocational training in co-operation with the National Association of Railways (10,000 students planned for 1968-69).
- The LILLE centre concentrates on preparing students for competitive civil service examinations (12,000 students).
- The LYON centre is partly concerned with commercial training, and also conducts primary education courses (22,000 students).
- The ROUEN centre which has just opened, will specialise in school level education for the 11 to 16 age groups (lower level of secondary school). 6-7,000 students are planned for 1968-69.
- The TOULOUSE centre specialises in general adult education (13,000 students).

Additional buildings will increase the student intake at these centres over the next few years and result in new centres being opened (in particular, one at ORLEANS in the near future).

The educational programmes organised by these various establishments are mentioned in the table which appears under Appendix II.

As can be seen there, the competence of these centres is one of "ratione materiae" not of "ratione loci". Although regionally situated, their scope is nation-wide (even international as regards students residing abroad). Interest is being shown in setting up specialised centres with a limited number of courses, available to all interested students, irrespective of their educational district. Such a system allows cheaper and qualitatively improved reproduction of study materials; additionally, the teaching programme is more effective for a group of allied subjects.

The distribution of teaching assignments among the centres depends fundamentally on recruitment possibilities of qualified part-time instructors, especially in technical and vocational subjects. This is why enrollment figures to date in PARIS have been much higher than those in regional centres.

(c) The number of centres itself is so determined that student enrollments at each one will be neither too large nor too small. The range within which they are economic and efficient is limited.

The prime cost per student decreases as student numbers increase approximately up to 40,000. Above this figure, the cost tends to rise, especially if many courses are involved. Teaching efficiency is lower if there are too few students, as the establishment in question must limit itself to a small scale operation. It declines beyond a certain figure because the need for a large supervisory apparatus cancels out the advantages of mass-production. Taking into account the current methods and techniques of the CNTE, and the above-mentioned two factors, the optimum student intake in this type of organisation has been fixed at between 30,000 and 50,000 students (depending on the number and homogeneity of courses taught). Of course, these figures could change as home study and communication media evolve: (audio-visual media, programmed instruction, correspondence tuition, etc.).

Experience has shown that it is more advantageous to establish new centres, not by creating new courses, but preferably by "distributing" existing courses that have already been tested and perfected at an established centre by an experienced and qualified faculty. The central institution at VANVES plays, in fact, this double role of tuition centre for courses requiring staff from the Paris region, and pilot centre for the general function of training and co-ordination.

2.1.3. - Teaching administration and technical services

(a) The "Centre National" is administered by a director, assisted by a head of administrative and technical services, and a number of departmental heads, responsible for the different types of courses and classes.

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(b) In particular, the departmental heads have the following responsibilities:

- liaison with the teachers: organising and distributing educational services; teacher orientation and advisory service, evaluation, distinctions, leave and replacements, overtime;
- student contacts: work supervision, discipline, warnings, expulsions; examination files, scholarships; progress cards, end of term reports, prizes and correspondence; Centre Information Bulletin, etc.;
- organising studies: establishing new programmes, finding qualified staff, presiding over teaching committees and staff meetings, liaison with school inspectors and with organisations having a parallel mission (company schools, adult education centres, radio and television, etc.);
- fixing work methods: selecting recommended texts, arranging for and supervising of preparation of courses, study plans, exercises, sample fair copies etc.; supervising the technical side of producing study materials, and their dispatch on schedule;
- dual co-ordination: horizontal (for each class), co-ordinating the work of all staff with whom students of the particular class are concurrently in contact; vertical (for each subject), co-ordinating the work of all staff with whom each student will be in successive contact from class to class as his studies progress. This dual co-ordination is especially vital in the case of home study, and where the same "class" may contain several thousand students, distributed among dozens of teachers and correctors;
- briefing new staff on a specific teaching method which they have never practised.

In each class, a "senior instructor" assists the departmental head in implementing these activities. It is planned to strengthen this administrative staff (currently understaffed because of increased student numbers) by giving senior instructors wider responsibilities for teaching units with fewer students. This will result in improved teacher co-operation and more effective methods.

(c) The technical services comprise the printing/reproduction offices for courses and study materials, parcel delivery services for forwarding and distributing correspondence and materials between students and teachers, the archives and documentation service intended to supply the instructors with all the educational material they require. Agreements between libraries and either the establishment or parent associations, enable the students to obtain those books (possibly records and other audio-visual aids) to which the study materials from the centre refer.

Some available figures reflect the industrial tempo of study material production and its complexity. Each week, the "Centre National" must type or reproduce 5,000 pages of manuscript or diagrams and print these on around 3 million sheets. This work does not only depend on the total number of students, but also on the variety of courses and their dispatch frequency. The CNTE together with the regional centres handle around 350 programmes ranging from primary school preparatory courses to the "agrégation", from training skilled workers to advanced technical instruction. A philosophy class may have 6,000 students; an Arabic course around ten students. In both cases the work of typing is the same. The work of reproducing the courses must be modified according to the numbers required in each case and to the nature of the texts.

Each course is specially planned, and dispatched on a weekly, bi-monthly or monthly basis. All dispatch dates must be strictly adhered to, especially when materials to be distributed are connected with practical work in group tutorials which follow a precise schedule (e.g. in technical education).

The printing offices are equipped for typing, simple photocopying right up to type and offset rotary reproduction - if need be, equipment is available for setting up a complete printing works. Such varied equipment raises the difficult and constant problem of anticipating needs and optimum use of the machinery, in other words, the problem of cost and efficiency. It presupposes an adequate technical staff which is experienced in graphic reproduction and well-versed in this very special type of work.

Liaison and distribution services must also keep pace with the size and complexity of the establishment. An average of 150 bags of mail leave VANVES daily; 80,000 students (via VANVES alone) correspond with 2,000 teachers and examiners; each student will have up to ten teachers, and occasionally each teacher will have up to several hundred students. These figures give some idea of the many channels of communication which must be established and supervised throughout the year.

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However, unlike at a post office, where responsibility ceases once the letter has been delivered, in this case, each correspondent is known, filed, observed, evaluated and classified. As in a normal educational institution, reports of marks and progress made are prepared and sent regularly to either the students or their families.

2.1.4. - Teaching staff

One of the special features of the French "Centre National" is the employment of teachers, who, for health reasons, can no longer practice their profession in the classroom (whilst, of course, retaining their intellectual and teaching abilities). These include teachers suffering from throat or eye afflictions, deafness, organic diseases requiring great care when moving about (e.g. cardiac ailments), former tubercular sufferers, who cannot be allowed to come into direct contact with students, teachers suffering from certain nervous disorders which arise through tensions, caused by the need to maintain classroom discipline, etc. In this way, deserving cases may remain employed beyond the periods prescribed in sick leave regulations. Those teachers, who best adapt to the special conditions of "remote controlled tuition" become permanent staff at the Centre.

In addition, both the "Centre National" and the regional centres employ a considerable number of teachers - especially in technical subjects - working concurrently at other educational institutions or in some vocational area. This practice has a threefold advantage: correcting papers on a part-time basis is much less tiring; these teachers maintain valuable contacts through their own oral teaching or vocational work; finally, part-time instructors can bring their own students (or apprentices) into contact with the correspondence students; this can prove very valuable for the latter.

2.1.5. - The specific nature of correspondence tuition

Explaining everything on paper, influencing by using simple words, knowing when to criticise without discouraging, adapting to physically impaired students, whose problems must be perceived by reading between the lines, all this presupposes, in addition to his special gifts, that the teacher has undergone either specific training or a suitable period of job adjustment. Constantly correcting - which means not only spotting errors and noting them, but also interpreting each mistake, explaining it in written form, and advising students on how to work now and

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in the future - is a much more difficult task, despite appearances, than oral teaching, sustained by live contact with the students, and by the emotive exchanges which it makes possible. These factors should be most carefully considered in terms of teacher recruitment and duties, as well as of their work media and conditions.

A major concern of the CNTE is that of establishing contact between teacher and student and of maintaining it despite the problem of distance; this concern has arisen because of the increased numbers and variety of students. Efforts are being made to shorten the periods needed to correct papers, and to reduce the number of students per teacher or per teacher team. All teachers receive an identity document, complete with photograph for each student, containing precise information on their appearance, their family circumstances and their work, so that the student becomes a clearly identified living being for the teacher, rather than remaining just a number. "The marking of each piece of homework must be carried out on the basis of the information supplied on each individual student." This same care is reflected in the encouragement given to an exchange of correspondence between teacher and student; such exchanges are frequent. The recommendation is: "Get the student into the habit of asking you questions, and answer them faithfully. Don't hesitate to write a friendly letter; show frequent encouragement, whilst remaining objective." Class consultations, by crosschecking teacher observations, enable in fact an intellectual and emotional "portrait" of each student or pupil to be developed. All those involved in correcting papers are kept up to date on their students.

In the same way, efforts are made to establish contacts between the students or pupils themselves, so as to create as far as possible relationships, equivalent to those which would develop in a normal educational institution. They are encouraged to correspond with each other at the same time as with their teachers. An information bulletin prepared by the Centre is sent out to everybody. This bulletin contains letters, extracts from homework samples, articles by the teachers, practical advice on work and guidance. Direct personal contacts are developed, moreover, during the supplementary practical oral teaching sessions; these are a recent innovation and will be examined later in this report.

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2.1.6. - Methods and media

(a) Traditional methods and media

The textbook and course material, printed or duplicated, remain the basic teaching tools for correspondence tuition in the strict sense of the word.

Commercial textbooks are largely used. Literary texts (complete works or extracts) together with reference works (dictionaries, grammars, maps, formulae, etc.) may be the same for correspondence tuition as for standard education. By contrast, the situation is different in the case of "courses", "treatises" or "primers" carrying a continuous description of a given subject and to some extent linking up that subject with study materials, exercises and advice. The latter are not normally prepared for the student working on his own. The notes, commentaries, summaries and questionnaires contained in textbooks make them appear forbidding, the result being that it would appear impossible to tackle the subject as a whole without the constant presence and help of a teacher, who selects the essentials from a textbook, or, even better, teaches the student to select and find, when some reference or explication is required.

To overcome this disadvantage as far as possible, the "Centre National" supplies additional information on those sections of the course in question which the teacher feels is inadequately dealt with in the prescribed textbook. If no work is on the market for this purpose, a complete course is provided, prepared by a "Centre National" instructor and reproduced by the Centre's own services. A study guide advises on the use of books (or other aids) and suggests exercises (taken from the textbook or the course, or separately prepared). These consist, according to need, of written tests and essays, practical activity (shorthand/typing, for example), work involving concrete findings (science/technical subjects, for example). Finally, marking tests and exercises is done in such a way that it teaches the student something as well as checks his work. In fact, the correcting process has three aims:

- to point out or have the student see his mistakes;
- to ensure the student understands the nature of his mistakes;
- to provide the necessary explanations so that the student can correct his mistakes, and avoid making them in the future.

The corrected paper may contain comments ranging from simple explanations to a revised version using fully the ideas provided by the student or pupil. Every effort is made to answer his

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question, to stimulate other questions, to advise him on the difficulties he encounters. Instructions to the correctors state: "It is the corrected material which brings the teacher to the students. His presence should be friendly and comforting. A great deal of understanding should be reflected in the correcting. In other words, this correcting process demands your fullest attention." Elsewhere, it is stated: "The teacher will not be satisfied with approving scholastic progress and acquisition of knowledge. Both in set work and correspondence, he will seek out revealing details of a student's aptitude and character. These, he will take into account when helping and advising. He will note carefully any observations on an aptitude card." Again: "His overall evaluation which will supplement marginal corrections, should be full of accurate advice. He will expose errors, but will also approve, encourage, compare and congratulate."

Unfortunately, the large number and variety of students does not always allow such an individual approach as the "Centre National" would wish; despite all efforts, tuition still remains frequently abstract. Doubtless, greater use of modern teaching techniques and information media will improve this situation.

(b) Modern methods and media

The updating of traditional methods and media is reflected in the three forms of programmed courses, individual audio-visual media and radio or television courses.

It is common knowledge that the development of programmed instruction has created entirely new technical learning conditions, especially for students working alone, and particularly for adults. Programmed instruction can allow for a progressive learning process which has been carefully studied and experimentally proven. It can be devised so as to ensure active student participation, to grade the course of studies, to avoid at least failure (a source of discouragement) if not mistakes (which are often instructive), to enable the results to be checked immediately. Under these conditions, a student at home can work more trustfully alone, at his own pace and under a more flexible educational programme, administered by his unseen teacher. The "Centre National" is currently experimenting in a number of ways in the programmed instruction field.

The use of "individual" audio-visual media is also at the developmental stage: records, magnetic tapes and audio-visual equipment, especially for languages; photographic material, slides, films and, doubtless, soon the use of the magnetoscope particularly for teaching geography, scientific and technical subjects, etc. There is no need to stress here the educational importance of these media; this has been frequently done already.

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Finally, radio and television give their support to the "Centre National" teaching programme. In addition to the general programmes of "Radio-Télévision Scolaire" which we shall examine later (para. 2.2.), there are special broadcasts for "Centre National" students which are linked up directly with certain subjects taught there (languages in particular).

2.1.7. - Supplementary on-the-spot tuition

Audio-visual media alone do not adequately meet the needs of home study tuition. A real education cannot be provided without living contact, that is without a basic minimum of specific group activity, involved in direct practical learning.

Various programmes with this purpose in mind may be found within the framework of "Centre National" activities or else they are organised in co-operation with the CNTE:

(a) Direct, supplementary tuition is given at certain shipping charter centres to the children of crew members.

(b) Direct, supplementary tuition is also given to school-age sufferers from neural ailments in the form of private lessons at home, two hours weekly, or at sanatoria. In addition, many students at such sanatoria receive on-the-spot tuition from local teachers, possibly from teachers, who themselves are undergoing treatment there (in which case, they are attached for administrative purposes to the nearest "lycée").

(c) In order to improve this type of programme, "medico-social centres" have been established in certain towns (Marseille, Rennes, Lille). One or more teachers undertake to help the students by personal visits, the oral tuition supplementing the correspondence instruction and making it more palatable. For those who are not physically handicapped, it is even occasionally possible to arrange several hours of supplementary group tuition per week.

(d) Juxtaposing practical on-the-spot training with theoretical tuition by correspondence is the requirement for adult education industrial courses, especially for those prepared at the request of large companies (and certain government departments).

Such bodies include:

Public bodies:

- SNCF
- Army and Navy
- Ministry of Justice (prison administration)

Private companies:

- AFOCA
- Anciens établissements DUBOIS (Cie Française d'Entreprises)
- BERLIET
- Compagnie Forges de CHATILLON
- Compteurs de MONTROUGE
- BONNET
- FERODO
- Forges et Chantiers de la Méditerranée
- Houillères Bassin de Lorraine
- Huard
- ANIFERMA
- Rhône-Poulenc
- Saint-Gobain
- SNECMA
- Société Métallurgique d'IMPHY

Private educational institutions :

- Ecole Française de Tokyo
- Cours Descartes à Léopoldville
- Elèves boursiers du Cameroun.

(e) By way of example, let us look at the programme organised by the chemical industry:

1. chemical workers are invited to enroll in general subjects courses provided by the "Centre National", so that they might reach an adequate level of general education;

2. the students receive their theoretical training with the help of course material (in a number of consignments) and exercises. The industry is asked to nominate a qualified engineer as "leader"; he receives the course material and distributes it to the students, whose course work he supervises;

3. practical training is done within the company, according to the instructions sent to the "leader";

4. three day courses are organised several times each year - most frequently in technical educational institutions which have departments preparing for the Chemical Technician "Baccalauréat" - for practical studies requiring special equipment.

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During 1966-67, 487 students from 278 companies took such courses which were taught by 74 teachers attached to state educational institutions and by 25 engineers from the chemical industry.

The results obtained, while far from outstanding, are more than encouraging:

	Total candidates	Successful
- BEI Assistant chemist	68	26
- BEI Assistant biochemist	7	3
- BTS Chemist	30	13
	105	42 or 40%

In other words, the chemical industry co-operates with the Ministry of Education in this type of correspondence tuition. Within each company, a "technician leader" is responsible for facilitating the study of adults who are enrolled in the course.

(f) "Group centres" have been set up for "Centre National" students (adolescents or adults) who are unable to obtain this supplementary training in a company. At present, there are some sixty such centres handling 1,500 students. Courses are provided leading to the diploma (CAP) of mechanical engineer, electrical engineer, electronics engineer and industrial draughtsman, as well as instruction at the level of the last two years of courses at a trade school.

These centres are located at technical schools or colleges which make available their workshops and laboratories for one day every three weeks or each month.

The centre directors receive a copy of the course materials, study plans and corrected versions of the exercises. The theoretical exercises are corrected either by "Centre National" instructors - however, the students bring the corrected tests to the work sessions - or by the group centre teachers (5 experimental "lycées"). In this way, theoretical study progression on the one hand and practical exercises on the other are on a par. The above-mentioned practical day courses, organised at regular intervals, are occasionally supplemented by short courses - two to six days - which are organised by the group centres. Such courses can only be attended when companies grant interested workers leave for this purpose with or without pay.

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These group centres are still at an experimental stage. Their two main difficulties are: (a) persuading companies to allow workers to regularly attend group courses; (b) ensuring compensation for loss of earnings and travel expenses. Possibly the solution will be found within the law of 3 December 1966 on vocational training and adult education which provides for a national fund both for promoting "permanent education" and for compensating - partially at least - wage losses and travel expenses. Decrees of application are currently being examined.

2.1.8. - Supervision of studies

Supervision of studies is no less essential for home tuition programmes than for normal classroom instruction. It is recommended that a pupil be required to show that he has done the work asked of him, within the time allowed and that his work be graded, less in relation to other pupils than for him to be able to evaluate his own progress, that he be rewarded for his efforts by the tangible tokens, represented by certificates of merit.

(a) For children of school age, for whom home study is a makeshift, the "Centre National" adheres to the same regulations as other state educational institutions. The course marks and reports are gathered and then sent to the families concerned. Averages are worked out, on the basis of which prizes can be awarded at the end of the school year. As regards after-school and adult students, both the age and mental attitudes of students, are, of course, taken into account, and the "Centre National" will certainly be encouraged to emulate the methods currently being evaluated at the National Adult Education Institute of Nancy (see section 2.3.).

(b) For school age pupils, study plans and programmes utilised are those in use at standard educational institutions. However, the study of a single subject, or a different rate of study from that in the ordinary classroom, are allowed for. The clearest example is that of "make-up" classes in a subject where a student is lagging behind (for example, the belated study of a foreign language). At the after-school and especially adult level this gap between general classroom study and that of a specific subject is even greater. The own regulations of the "Centre National" already provide for a number of such possibilities, and this scope of action should be maximised in the future, as is already the case in various non-governmental educational establishments.

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(c) Most "Centre National" courses, as at normal school and university level establishments, prepare students for examinations, degrees, or open competitions which are entered both by its own students and others.

However, attention is now being given to the need to enable correspondence course adult students to obtain certificates of proficiency in non-traditional subjects. These certificates would appeal to a large number of self-taught students who are frightened away by the usual typically academic examinations and diplomas. Progressive tests, adapted to the adult way of thinking would constitute a regular incentive - each test making relatively limited demands on the students so as not to prove discouraging in advance, and being rewarded by an appropriate certificate which might eventually be professionally validated.

2.1.9. - The results

Despite a teaching method which is still mainly (and of necessity) based on books, and means which cannot keep pace with the rapid increase in student numbers, the quality of "Centre National" results is acknowledged.

For example, successes in the "baccalauréat" examinations, in the "concours général", in certain diploma and technical competitive examinations, the confidence of large companies which entrust the "Centre National" with training its employees, the countless letters of gratitude to be found in the files, all testify in favour of this establishment and its methods. Long considered as a makeshift for ill students or as a way of catching up with one's studies (or of cramming for the "baccalauréat"), official correspondence tuition has at last come of age.

This is due to the quality of staff, selected from the nation's educational system by methods already explained; it is also due to the students themselves. By virtue of their reasons for taking up this type of study, they are in general particularly serious and attentive students.

Those sick and disabled find in study a relief from their afflications, and a compensation for their feelings of inferiority. Students living abroad are children from good cultural environments, living in eminently creative conditions. Family or social "cases" are impelled by their sense of responsibility. "After-school" students are aiming at a job to which their studies are the key, Students who failed academically during their normal schooling, usually turn to

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correspondence tuition, when they realise that they must study in order to advance in their work; whereas they resisted the compulsion and tempo of school work with apathy, they show a new spirit when applying themselves to a more flexible type of study, in which they feel they are more in control of their own endeavours.

However, adults in particular find in this form of instruction - especially when it is combined with audio-visual aids and a supplementary practical training - a tool that is particularly suited to present-day needs of mass education.

The current problem for the "Centre National" is basically to adapt even more effectively - especially in its methods, originally designed for school age students - to the growing demands of this category of the population.

2.2. - "RADIO-TELEVISION SCOLAIRE"(RTS)

2.2.1. - The role of the RTS in the educational system

The RTS - in contrast to other institutions in Europe having similar objectives and forming an integral part of public or private radio/TV establishments - comes appropriately under the Ministry of Education; however, it handles only a part of the ministry's programmes, and does not cover higher education, nor - and with more reason - the programmes sponsored by the other ministries, such as Agriculture, Social Affairs, etc.

The RTS, therefore, is far from covering what can be generally termed the field of educational radio and television. Nevertheless, it is increasingly developing its activities in the direction of "permanent education", hence its place in this report.

2.2.2. - The structure of the RTS

School broadcasts for primary level were instituted in France at the end of the last war. Educational television began, for its part, at the beginning of 1957. These two channels - serviced technically by French State Radio/Television (ORTF) - merged in 1962, thus creating the new service of Educational Radio/TV.

In 1963 the first developmental plan (1963-67) was put into effect, giving the RTS direct responsibility for producing television programmes (radio programme production is still handled at the ORTF studios). From this date forward, it was necessary to set up a considerable teaching and technical organisation which has developed ever since. The RTS now employs 137 permanent teaching and administrative staff, and 151 technicians and workers; to this number must be added numerous television writers under contract and part-time technicians. It also has a wide range of equipment, in particular, a three camera visual studio, a six camera electronic studio with all the auxiliary equipment, several processing studios, one of which is highly advanced technically, a six channel mixing room, two projection rooms, several cutting rooms (one of which has tri-film equipment), a film library with pre-viewing equipment, a Dynaphone film copier, mobile equipment for exterior shooting, etc.

These administrative and technical structures are currently being re-organised. It is planned to substitute for support aid sectors (radio, TV, radiovision), functional sectors (i.e. concerned with the actual subjects taught and areas of activity); at the same time, the administrative and financial organisation will be improved. Social advancement and adult education will be the first sector to be re-organised in line with the new trend, so that it can cope with its special tasks more flexibly and effectively.

2.2.3. - The operation of the RTS

The general framework of activities is fixed by a ministerial commission which determines overall programme content in terms of the developmental plan, particularly with the help of the Inspectorate General, key members of the "Institut Pédagogique National", and qualified consultants. Programming and timetable drafts are submitted to the commission; of necessity, the timetables must fit in with the broadcasting facilities offered by the ORTF (which enjoys the state monopoly).

These permanent services are then charged with planning both programmes and study materials. The latter comprise information sheets and a regular Bulletin, material for teachers, containing instructional cards and special literature intended for the students. This literature is published by the "Institut Pédagogique National"; the Bulletin is distributed on a subscription basis, other materials are disseminated free of charge. Certain required course-books, issued by regular publishing houses, are sold generally (especially in the case of language courses).

To date, for 1967-68, 25,842 annual booklets and 58,374 quarterly booklets for teacher guidance have been distributed, as well as 478,000 student booklets; 16,000 copies of the RTS Bulletin are printed (12,000 on subscription, and 4,000 free of charge).

For the period 1967-68, 680 radio programmes (from a total of 1,996 broadcasts) and 340 TV programmes (from a total of 890 transmitted) have been produced.

More specifically, with regard to adult education, and within the scope of optional disciplines as defined by the ministerial commission, a specialist programme committee fixes the educational requirements to be satisfied, and crystallises the experience of adult education bodies in those disciplines which the RTS plans to cover. This committee comprises, in addition to representatives from the Ministry of Education and specialist staff from other interested ministries, also a wide-range of representatives connected with this specific type of education: adult education centres, large companies, chambers of commerce, training centres, adult education associations, family associations, rural clubs, youth hostels, cultural centres, etc.

More specialised working parties carry out research into and pinpoint for each programme series, the aims - with the public in mind - academic progression, audio-visual teaching methods, and the way in which audio-visual media and study materials complement each other. Linked with the production team nucleus are those whose experience is valuable such as teachers, course organisers, tutors, advisers on content, journalists ...

For each broadcast, a team, led by a co-ordinating professor gathers together the teacher, responsible for content, and the producer, who, after joining in the technical planning, directs the shooting. It is at this level, that the final shape of the programme emerges. However, as far as possible, of course, the teacher attempts to make his views known at the various stages of production: shooting, editing and cutting.

2.2.4. - RTS broadcasts during 1967-68

RTS is on the air nation-wide for 22.10 hours per week in the case of radio, and for 13.08 hours in the case of television. There are various types of broadcasts:

(a) Auxiliary school broadcasts

These accompany and facilitate class instruction. Radio broadcasts totalling 15.10 hours for French, English, Latin and German are provided for all classes in the first four years

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of secondary school (premier cycle du second degré) as well as for music and musical notation (30 minutes). Programmes totalling one hour at primary school level are also broadcast for singing, music and recitation. Mention should also be made of a fifteen minute programme aimed at kindergartens.

Television carries mathematics for the lower secondary school forms (6ème, 5ème, 4ème, 3ème) (four broadcasts of 20 minutes each) and technology (4ème, 3ème) (1). The latter is an example of the kind of subject that television has helped to introduce and develop in teaching. It also shows, in terms of methodology, the possibilities for combining television and programmed instruction.

In addition to these broadcasts which extend throughout the school year, there is a special programme during the summer vacations intended to prepare students for the baccalauréat examinations in September: this is broadcast on radio every morning, and two hours every afternoon on television. These programmes provide the main outlines of study, and stress teaching how to use books, personal notes and/or documentation. Each week the Director of Studies appears on the screen and talks to the candidates; he also replies on radio to questions. Supporting literature of some 200 pages containing advice, broadcast data sheets, homework and exercises is widely disseminated (in 1966 : 36,000, in 1967 : 29,300). An enquiry made after the 1967 operation showed that 60% of the 87,500 candidates sitting for Part Two of the baccalauréat followed either all or part of these broadcasts, and that 40% of them requested and received the supporting literature. This wide-ranging series of broadcasts is retransmitted live by the German and French services of Swiss television, and may also be viewed in certain border regions (e.g. Belgium).

(b) "Polyvalent" broadcasts

These are documentaries, aimed at supplementing classroom instruction, and may also be used in teaching persons living in remote areas, and other adults of equivalent standard. At the elementary level, technology and arithmetic are taught as well as history and geography, and programmes such as: "TV-travel", "The Animal World", "Life Around Us", "Current Events", "The World at Work", "Work on Language"; these programmes are shared by radio and television. At a more advanced level, there are programmes on philosophy, science, French and literature together with ninety minutes of either theatre or the film club.

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(1) Classes in France are numbered from above, not below. The 6ème is the first class of secondary education, the 5ème is the next, etc.

(c) Special programmes for teachers

These are intended to further teacher training as well as brush up the teachers' knowledge. There are radio programmes, for example to help teachers of classes created since the school leaving age was recently raised; there are TV programmes for elementary teachers (30 minutes) and for intermediate level teachers (30 minutes). There are additionally programmes offering refresher courses, science, linguistics and philosophy.

(d) Special programmes for adults (so called "advancement" or "promotion" programmes)

These began in 1963, and have a dual purpose:

- vocational advancement with a view to acquiring the necessary knowledge in order to attain a higher vocational standing;
- cultural advancement with a view to enriching mens lives by raising them beyond their present cultural level.

Of course these two aims are very closely linked. Cultural advancement may result in vocational advancement particularly in such a varied industrial society as ours. Inversely, any endeavour in the field of vocational advancement must be linked with cultural advancement, especially when such endeavour is undertaken under the aegis of the Ministry of Education - the latter never separates its technico-economic responsibilities from those in the educational and humanistic fields.

The Second developmental Plan has extended broadcasting for 1967-68 to 5 1/2 hours weekly, of which 2 hours are to be used for re-broadcasts. This practice:

- increases one's chances of catching the programmes if prevented the first time for professional or family reasons;
- makes it much more profitable for those who can follow both broadcasts, especially if they have the good sense to study the supporting literature between the two broadcasts;
- enables group training leaders to preview the programmes.

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The programme series for 1967-68 comprises essentially modern languages (English and German), practical courses on electricity, programmes on improving one's self-expression, both written and oral, in French, on how to read elementary blueprints, on basic economics.

From the technical and academic points of view, the programme introducing the art of expression ("A mots découverts") has become a classic of its kind. It is, in fact a highly disciplined synthesis of the most varied and contemporary methods: "spelling flash cards" which, subsequently, by musical and visual means help to remove negative habits induced by the incorrect position of a given letter, oral work which reflects the impact of linguistic obligation on the mechanism of language, various visualisations of attempts at expression in narrative or descriptive works. The supporting literature offers synthetic or analytical exercises to aid self-improvement, application or acquisition of the data given; it is clear that these exercises are intended to complement the broadcasts. A number of these exercises utilise programming methods which tie in with what is shown on the screen.

Mention should also be made of the series "Savoir Habiter" (Knowing How to Live) (10 broadcasts). It has a particular type of "cultural advancement" in mind, based on an analysis of accommodation as a technical subject. The supporting literature is based on three guiding concepts: to dissect and analyse the way the programme is designed, to provide supplementary information, and, above all, to verbalise and concretise what the television image did not expound.

2.2.5. - Planned programmes for 1968-69

During 1968-69, the RTS will reinforce its activities in the priority areas. In particular, there will be informative programmes intended for 4ème and 3ème lycée classes which will be of value for general school and vocational guidance; in addition, there will be more intensive programmes for school teachers and adult education teachers.

In the adult education sector, programming will be developed in the following areas:

1. Broadcasts on self-expression in French will be revised and extended;

2. Common links between programmes teaching mathematics for the CAP (Certificat d'Aptitude Professionnelle) and the BEP (Brevet d'Enseignement Professionnel) will result in a new and fundamentally important series;

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3. The programme section entitled "Technical and scientific training" will be boosted both by extending the series "Draughtsmanship" and by the new series "Introduction to Electronics";

4. Modern Languages - technical vocabulary will be introduced.

A new programme sector will shortly appear which is likely to mark an important date in RTS develpment, namely "Advancement" ("Promotion"). Through a series entitled "Information and Adult Education Teacher Training" an effort will be made to blanket the adult population with a "tighter" programme. This programme will be implemented in co-operation with the most qualified organisations in this field, in particular with the INFA in Nancy (see para. 2.3.).

2.2.6. - The adult audience of the RTS

The initial surveys aimed at ascertaining more clearly the composition of the participating public and its study motivations revealed that all four age groups were more or less equally represented (25% each for the under 30 group; between 30 and 40; 40 and 50; and the over 50 group). A large number of "medium level personnel" were noted (technicians, representatives, nurses, teachers) as well as a few more typical categories (office staff, housewives, management, foremen, pensioners).

The surveys found "a desire to learn" among older interviewees, and that the younger adults were preoccupied with the practical applications of study. All expressed their awareness of the advantages to be derived for one's career; however, this was apparently not enough to induce them to study the supporting literature constantly and actively. Very few students were found who were willing to supplement the television course programme by participating in discussions, by taking tests or joining in group study. In other words, apart from those limited cases, where they were repeated and utilised by educational bodies, the educational broadcasts appear to have been viewed as an intermediate stage between entertainment and instruction.

On the basis of this information, the RTS endeavoured to tighten up its methods, and to define both its own instructional aims and those at adult education centres.

At present, only a small percentage of the adult population follows the programmes, making use of the supporting study materials. The breakdown is as follows; it distinguishes between adults studying alone and those studying within an educational organisation.

SERIES	INDEPENDENT STUDY	%	ORGANISATIONS	%	TOTAL	%
"A mots découverts"	5,182	36	9,096	64	14,278	100
Electricity	7,191	63	4,220	37	11,411	100
Economics	7,757	44	9,992	56	17,749	100
Draughtsmanship and "Savoir habiter" (Recent broadcasts)	1,444	39	2,278	61	3,722	100
TOTAL	21,574	46	25,596	54	47,160	100

However, a much larger percentage of the population follows these broadcasts without obtaining the supporting study materials. According to the ORTF surveys, the number is around 300,000 - 400,000 persons, that is twenty times more than the number of study materials distributed.

Other surveys have attempted to clarify the way in which participating adults evolve, how group reception is organised, and the effectiveness of certain methods.

(a) It was ascertained that more younger people are participating, that the socio-vocational strata involved are extending, that those adults who prepare for examinations to improve their status are increasing in number (44% of subscribers to study materials), that the role of adult educational bodies as distributors of knowledge is on the increase. However, indivudial motives often remain obscure.

(b) Every possible and imaginable form of interplay was encountered between the role of the broadcast, that of the tutor and the sutdy materials, as well as the key part played

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by exchanges of information between the RTS and the tutors; any improvement in these inter-relations produces a positive change in attitudes.

(c) Generally speaking the methods are appreciated, but the "content" is often viewed as insufficiently adapted to meet specific needs. More discussion groups have been suggested, together with more information material, articles in the national press, and the distribution of audio-visual material in the form of 16 mm film.

Audio-visual techniques applied alone have turned out to be hardly more effective than that of written exercises, when used alone. On the other hand, the results are better when both approaches are associated.

Normally, all assessment procedures and their results are intended to influence - as feedback - both production and the general policy of RTS. However, the extreme inertia of a feedback system based on these surveys cannot be denied. It takes many years before the slightest basic discovery can have any impact on an audio-visual production.

2.2.7. - Relations between the RTS and other radio/television networks or correspondence course institutions

RTS broadcasts merge well into the entire complex of ORTF educational programmes, as is revealed by opinions expressed in the specialist magazines. For example, the programme "Chantiers Mathématiques" (applied mathematics) arouses interest among many engineers, who are eager to learn about new mathematical forms. Plays and films highlighting the history of the cinema, broadcast presentations of authors' works, and programmes dealing with philosophy or the history of civilisations reach the widest public; a number of similarities thus emerge in the results which the ORTF and the RTS obtain throughout their cultural programmes, although both bodies start out with different goals in mind. Both are seeking increasingly for forms of expression which will standardise and blend their efforts.

A similar situation exists between the RTS and correspondence course instruction which is provided, in the strict sense of the word, by the "Centre National de Télé-Enseignement". Whilst the RTS is intended for all televiewers, and offers them the broad possibility of advancement, the CNTE does not deal with a potential group, but with a concrete public, made up of students who have enrolled with a specific aim in mind; this involves a regular, supervised effort. The initial divergence of

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objectives is therefore considerable; co-ordinating their respective tasks is still a sporadic affair. However, the situation will doubtlessly be different if an integrated structure is set up; this would enable an educational interaction to be introduced among the various supporting elements of television instruction which itself (correspondence, RTS, audio-visual study materials distributed by post) could be promoted among the various types of group education (in firms, institutions, union or adult education associations). However, compared with certain solutions to this problem in other countries, where such integration has already been achieved, the present solution in France has the advantage of obliging each sector (on the one hand RTS, on the other correspondence course instruction) to pursue to the full its own potential and characteristic aims.

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CONCLUSION

Designated in various ways, a growing number of public or private bodies provide, for a constantly increasing number of young people and adults, a type of education - outside the traditional framework - which is very varied in content, method and level.

These forms of training and education are proving especially useful in meeting the new needs of continuous and permanent education which are being felt by people in advanced societies. The institutions involved are still searching for the most suitable structures and methods in order to satisfy these requirements. Without any doubt, the best way to make progress in this field is to examine what has been accomplished here on an international level and to compare the results.

The sole aim of this report was to contribute to such a pooling of experience.

APPENDICES

APPENDIX I

THE EXPERIENCE OF THE CUCES IN CORRESPONDENCE COURSE TUITION

I. General remarks about the CUCES

The "Centre Universitaire de Cooperation Economique et Sociale" (CUCES) was established in 1954. Its initial task was to provide courses for social advancement purposes ("promotion sociale") and for further training of managerial staffs. It has developed greatly during the last fourteen years, and this development may be roughly delineated as follows:

Initial phase

People applied to take courses with the CUCES, on an individual basis; in fact, it operated like a national adult education institution.

Its activities covered two main cycles of tuition:

- certificates were awarded at the completion of the first:

  Advanced work promotion
  (750 students this year),

- the second cycle for which no certificates were issued - and in which more than 1,250 students participate annually - operated roughly speaking at the following two levels:

  Engineer and management level
  Foremen/technician level

  The studies were structured according to a very flexible formula, resembling a restaurant menu: each student enrolled chose the course programme that suited him best, and set up a "tailor-made" time-table of studies or further training.

Chief features of these programmes

1. Enrollments were always left up to the individual students themselves. The system was very liberal, based on voluntary participation.

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2. Based upon the needs and the actual standards of the public, the educational strategy seeks to develop a process of initial teaching and learning preparing students for an exchange of ideas and dialogue.

3. These programmes were not merely scientific or technical in content. They stressed consistently training in methodology; the CUCES has developed general, non-scientific training courses which, for example, take up

   20% of evening courses
   25% of full time courses annually.

Second phase

It became apparent

- that these programmes did not meet all requirements, and
- that, satisfying individual needs was, certainly necessary, but not enough.

In fact, the problems facing an individual are not problems in themselves, but to a great extent are connected with and conditioned by his vocation; they must be resolved as close as possible to the place and situation within which they arise.

This has been corroborated by requests both from industrial enterprises and public bodies.

As a result, the CUCES began to operate in various ways in:

- public help organisations: nursing schools, hospitals in Paris
- private French companies: Peugeot, Ciments Lafarge, Forges de Strasbourg
- the Office Chérifien des Phosphates in Morocco,
- the Société Nationale de Sidérurgie (Steel) (or Société Bonoise de Sidérurgie) in Algeria

Main features of this action

1. Co-supervision of the activity

Requests to the CUCES were not dealt with by the CUCES alone; a programme would be co-supervised by the factory concerned together with the CUCES, both pursuing mutually independent pedagogic aims.

By definition, the programme was transitional in nature, and its scope would vary at different times; it was, in fact, based on a mutual understanding to offer courses of study.

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2. The CUCES was responsible for training instructors

The actual training was given by instructors, who were selected from the place of work. The course content would be discussed by the instructors with their trainees. The gap between training and work situation was to be as short as possible.

3. The question of training was not approached in terms of individual but of collective imbalance, i.e. an imbalance in the social structure.

As an organisational system, the factory serves concurrently as the

place)
subject) of training
object)

via those, who undertake it.

Third phase

We have just mentioned imbalance, and it is clear that this concept, when applied to industry, reflects only a percentage of the facts. The factory itself depends on a technical, economic and social environment which conditions it greatly.

If the CUCES had not become aware of this fact as it evolved, the situation today in Lorraine would be there to remind it.

Three years ago, the CUCES was called upon to set up a new system to cope with the problems arising in the iron deposit basin. It would take too long, and yet, it would be necessary, to describe the background to this programme, the vital, initial surveys which determined the programme's course, as well as the many working group meetings, representing the :

- the employers' federations,
- the employees' federations,
- the government.

It was to these policy making authorities that the CUCES submitted its working schemes and methods as well as its educational concepts.

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Courses have been in operation for the last two years.

More than 1,000 miners have followed or are following one or several study programmes, and in their own way are taking a path which they had not trodden for the past 10, 15 or 20 years, namely the path of "education".

Main features of this type of action

1. It is not a CUCES programme

It is primarily a programme initiated by representatives from the region who together with the CUCES supervise and direct it.

2. The CUCES has an extra-mural task

It places its resources at the disposal of the region and helps to set up an educational system which approximates as far as possible to the needs of the "consumer".

This contiguity should be interpreted from three angles:

- geographic contiguity: the number of training locations should be increased;
- human contiguity: the instructor should be from the same vocational environment as the trainee; he shares his anxieties and his way of life;
- intellectual contiguity: the instructor uses the same type of language; he knows what is concrete for and familiar to the trainee. He can listen to his problems, his expectations and take them into consideration.

3. The teaching process contains in itself the means to reveal the needs of the trainee

The immediate and direct effect of these features is the evolving nature of the system which is set up and which must continually adapt to the training situation as well as to its regional and contingent determinants.

The CUCES programme, which initially was to provide a basic general type of training, has gradually moved toward practical training courses, and now prepares students for diploma courses.

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This change has caused the CUCES to examine the links existing at present between general and vocational training, and has led the CUCES together with representatives from the technical education sector, to study the possibility of dividing course content into units, and a system of "unit capitalisation" (points system).

Problems remain; not everything has been solved. We are thinking specifically of the relationship of such programmes to state industrialisation plans. We are concerned, in fact, with not always being one war behind the times and with being able to plan our programmes with more clearly defined goals in mind.

In summary:

There are three main lines of action to be taken:

- centred on the individual,
- centred on the factory and on the individual-organisation relationship,
- centred on the region and on the
    individual-factory technical context,
    economic and social context,
    regional context relationship.

These methods of approach are basically complementary. They have some meaning only to the extent that they enable us to study the conditions and forms of continued adult education.

II. "Tele-guided" tuition: one way toward permanent education

Ultimately, the methods which we have just discussed, are connected with the following essential factors: a reduction in the number of instructors, by making use of persons already working in the environment where the training takes place; taking as one's starting point the concrete situation and daily personal experience of the student and leading to general culture; a balance between the contribution of knowledge and one's personal development; self-instruction and reciprocal education; alternation of theory and practice; mental processes applied and work methods used; finally, self-supervision which enables each student to measure his progress in relation to his own aims.

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However, whether at university level, in the form of a regular and total retraining programme, or within a socio-vocational milieu, this permanent education can hardly apply to students, living in isolated circumstances or in a widely scattered community, i.e. persons who cannot attend classes. Moreover, although the few experiments in this field carried out hitherto, have been enthusiastically received, they still reflect an embryonic stage, if we consider the scope and importance of adult education as well as the organisation which it requires. This is why the CUCES, itself, has undertaken a number of experiments in the field of "tele-guided" home study tuition. Before we examine these experiments in detail, let us try to see them in relation to correspondence course instruction by looking at the main aspects of the latter. Symptomatic of correspondence course tuition is its multi-layered flexibility:

- in applicability: draughtsmanship as well as stenography are taught, the art of salesmanship as well as mathematics, and with the help of increasingly varied graphic media;
- in study organisation: the student may work when and where he wishes, within a pliant framework selecting the most conducive rate of study, and without having to attend classes;
- in work evaluation: via exercises, essays, answers to specific study questions, work projects, examinations, all of which are prepared in a relaxed atmosphere;
- in study course distribution: these courses are available to students living in the most remote areas and from all strata of the population, providing they can read and write.

However, this type of instruction presents certain problems: on the one hand, it is difficult in practice both to adapt a study course to meet the needs of each individual student, especially if he is clearly above or below average, and to allow for every difficulty that every student may encounter, when a single word would have sufficed to resolve the obscurity in question. From this angle, it is clear that the introduction of programmed instruction and audio-visual aids represents a considerable advance. We shall examine certain experiments in this sector.

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On the other hand, there is a very serious problem, arising from the very concept of correspondence tuition, which is reflected at apprenticeship level: one general feature of instruction lies in confronting the student with a number of situations to be resolved; he is thus trained to handle similar situations which he may meet subsequently. In correspondence tuition, irrespective of the quality of the course, the following two elements will always be missing: contact with others, which is in fact one of the determining factors in any real work situation, and the habit of group activity which is becoming increasingly important. In other words, the trainee situations, reflected in correspondence course tuition, create a considerable aberration factor and, consequently, their effectiveness will always remain limited.

This cultural isolation results in the second kind of difficulty encountered by correspondence course students: not only does this type of tuition exclude certain categories of training, it also strengthens in students such personal tendencies as loneliness, individualism, and a refusal to take other opinions into consideration (not to speak of a refusal simply to listen), a situation that is already so typical of learning in our country.

This psychological isolation, the absence of human contacts, of life, create a distressing situation: the student is not motivated; if he falls behind in his work at any given moment, no one is available to help him resume his protracted and austere endeavours. There is no immediate outside help he can call on, and the method of written advice is inadequate for really guiding the student, not merely before he enrols in a course, but, especially, during his instruction; this method cannot deliberately accelerate, slow down, stop or even change a course of tuition, that is, it cannot create measures which have become necessary to preserve the mental equilibrium of participating students.

We are also aware of the bitterness and resentment that are caused by failure (often a synonym for not having passed an examination - which proves very little in the case of an adult) after tremendous efforts, vindicated alone by the tenacity of a poorly advised student, This state of affairs is especially serious as it is accompanied by a distressing family and cultural isolation, resulting from the amount of work needed to achieve results.

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Taking a standard type course, when working eight hours or more in a factory, involves of course great material sacrifices in terms of loss of earnings; it also means sacrificing leisure time and family life, possibly over a several years period. There is a consequent risk of maladjustment, even for those students, who are strong-willed and determined. This situation is exacerbated in the case of correspondence courses.

To conclude our remarks on this subject, it should be noted that the type of students taking such courses are not automatically trained to study on their own; yet they must do their homework in the evening, just like their children, and moreover often under very inadequate living conditions, a factor which creates even more psychological problems.

III. The transition to "tele-guided" group study: current CUCES experiments

What steps should be taken? How should they be implemented? An initial answer to these questions lies in supplementing this type of education by creating small study groups. These produce the necessary social situation for the trainee, plus direct contact with the instructor, which allows him in particular to obtain better individual guidance. However, another problem arises: which instructor? The number of teachers is too small to guarantee regular multiple-group instruction. In addition, they are not necessarily prepared to do this kind of work; the courses they offer may not be adaptable, unless reworked in conjunction with those for which they are intended. Hence the concept of "tele-guided" group study, by which a considerable number of the above difficulties may be resolved.

The experiments which we are about to describe are very varied in nature, but the concept of "tele-guided" study is at the basis of all of them; each experiment aims at preserving a maximum of flexibility linked to a form of reciprocal education within a group that is "assisted" more or less at long range by a specialist; each experiment applies the principle of student self-evaluation, and is concerned with developing a sense of individual autonomy to the fullest which can only be acquired through contact with others by comparing opinions and progressively training one's own judgment. Nevertheless, and we shall examine this factor in conclusion, these experiments represent only one step toward a more total solution which can be fully integrated into the working life of man.

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1. Programmed instruction with and without group study

Among the "assisted" tuition experiments, one of particular importance reflected the use of programmed study materials with or without group study. This led the INFA during 1967-68 to undertake a number of surveys which are reported on briefly below:

159 persons (87 iron ore miners from the Briey region and 72 workers, office and technical staff from the Nancy region, divided into 39 taking social advancement - "promotion sociale" - courses and 33 enrolled solely in this experimental course) followed a training programme, based on the use of programmed study materials, and using, however, four different approaches:

A number of students (19) worked completely on their own, although in case it was requested, and only under this condition, provision was made for a teacher to assist them; a second group (52) worked partially alone, that is they met regularly as a group for course briefings; a third group (36) met together at each work session with teachers, whose participation, however, was limited to answering individual questions; the final group (52) met together at each work session with fully participating instructors, who utilised the programmed materials.

Tests were given regularly before the trainee period began, during and immediately after it was completed, then a few months later.

In addition, discussions were held with the adult students to determine to what extent they were satisfied or dissatisfied, and which drawbacks or advantages they had noticed in these training techniques.

The main results of this survey are as follows:

(1) Quantitatively

- Neither the final test nor retention test enabled us to confirm the assumption that a group trainee course with an instructor gives better results than a group of trainees working partially alone, that is, each student working on his own, and meeting with others under an instructor every fortnight. It was only at Briey that a preference was shown for a wholly instructor-oriented group.

- By contrast, the student category working completely alone (this involved only two segments of the entire participating group) always produced significantly poorer results compared with all the other categories.

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- There was a much wider distribution of marks from the student groups working alone than from those studying with a tutor, that is, the presence of a tutor gives the group greater homogeneity.
- Individual characteristics such as age or level of ability (in logical thinking) play a relatively more important role in the success of a trainee working alone than of a student participating in group training.

(2) Qualitatively

An analysis of discussions with individual students at the end of the experiment revealed the typical problems of someone working alone:

- Reluctance to ask for help

The system of "pedagogic aid" available for students working completely alone was very rarely utilised by those having difficulties; this was because students were too shy to explain their setbacks to an instructor whom they did not know.

- Inadequate study discipline

If this type of training reflects a need, it has not yet reached the priority level.

The home study trainee course was not followed regularly and suffered qualitatively, especially as the adult students considered it a pursuit unconnected with their everyday lives. There were those who worked fitfully and only when they felt in the mood, and who considered their study burdensome; others, who applied study methods already tested by other trainees, welcomed their courses as a form of relaxation.

Former CUCES students, working alone derived the greatest advantage from the courses together with recent school leavers.

- The need to express acquired knowledge

The regular course briefings helped students, partially working on their own, to regain their vigour somehow; this was due both to the pedagogic impact of the group meetings and to their social content.

In particular, in the case of programmed instruction, these group meetings gave the student the possibility to extend and generally rehearse the knowledge which he had absorbed gradually.

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Moreover, by virtue of the work method involved, the student working alone, found it tremendously difficult to be both judge and judged, to determine his own trainee level with no criteria to assure him that he was moving in the required direction. Contact with others who were studying alone, enabled him to see things in perspective.

Finally, the adult student has no faith in the knowledge he has acquired until he has discussed it within the group. It is the group as much as the teacher which sanctions this knowledge and breathes life into it.

The frequency and content of the course briefings depend directly on the degree of autonomy which the individual students adopt toward their training.

Apart from these problems, programmed instruction by its very characteristics (resolving difficulties in stages, independent evaluation of one's own progress by having the correct answer available) has become an effective method for stimulating or restoring a degree of self-confidence in students working alone. In this sense, it is a valuable tool for encouraging adults, discouraged by their earlier education, to take up some form of training.

In our opinion, this incentive to pursue a training course should itself adhere to certain conditions in the same way as the ensuing programmed trainee courses.

2. Autonomous groups for supplementary foreign language training

When the CUCES was established in 1955, the further training courses for management personnel dealt mainly with economics and the social sciences. A demand for supplementary foreign language courses quickly made itself felt.

Even if one can approximately understand a text after having studied a foreign language at secondary school level, in most cases it is very difficult to converse correctly. Nowadays, a knowledge of English or German is becoming increasingly necessary. The demand for such further training courses is growing, therefore, in importance.

This is why we began to include language courses in our refresher training programmes. These took the form of groups in the "classic" tradition: around fifteen students would meet with a teacher and work for two hours weekly, using the "classroom" method.

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Very soon we were obliged to modify this approach for the following reasons:

(1) it was difficult to meet all student requirements;

(2) very few teachers were familiar with or knew anything about the newer teaching methods (audio-visual techniques);

(3) the fact that the students came from far and wide seriously impeded the "classical" teaching formula: the students had to meet at prescribed times and places;

(4) each group contained a large number of students, resulting in minimal individual participation;

(5) attendance fluctuated in view of:

- the rigid system (prescribed hours and locations),
- the inevitable restraints for an adult (work, family life, etc.);

(6) there was a desire to reduce the expenses involved.

Consequently, we prepared and included in the courses intended for engineers and management personnel, a new method, that of autonomous groups for extension language courses in English and German.

The aim of this method

To enable interested students to attain the following goals under the best possible conditions:

Having already studied a foreign language and after a considerable time-lapse since they were at school, to be able to BRUSH UP, CONSOLIDATE and PERFECT their knowledge (for the moment, this system excludes absolute beginners).

In concrete terms, this means that students may practice the conversational side, whilst concurrently revising those grammar rules which are essential for speaking and understanding the language correctly.

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The techniques

What is an autonomous group and how does it operate?

At the beginning of the year, future participants take a test, comprising an aural section to determine oral comprehension, and a written section to check grammatical knowledge.

The results make it easier to set up groups which will be as homogeneous as possible, consisting of between four and six persons, all of approximately the same level of attainment.

The groups are autonomous to the extent that they decide the frequency and schedule of their meetings (on an average one two-hour session weekly). Similarly, the meeting place is selected by the students; in this way, they can gather in districts other than urban centres.

The group studies with the aid of audio-visual material which is provided (magnetic tape recordings, texts, illustrations), and which has been specially prepared for this programme. It utilises a recorder for listening to the study tape, recording exercises and for oral communication with the supervisor. The Skinner principle of immediate correction is employed. An additional means of supervision is the liaison tape (see page 69: Liaison tape).

Each group has its own teacher, who follows its progress throughout the year. He is present at the first meeting, then visits the group every five weeks, in order to determine what progress has been made and what difficulties encountered to answer questions, etc. Nevertheless, the teacher is always available, and can, at any time, help them out of difficulties.

This method has been used for German since 1964; so far, thirty-two groups have applied it.

A three year programme has been established for lower, intermediate and advanced levels respectively.

Thirty-four English language groups have used the method since 1966, but only at the intermediate level. It is planned to set up a programme first for advanced, then for lower levels.

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Preparing study and liaison tapes

1. Contents of a study tape

A. Memorisation phase:

- Entire text is given:

  A text (short narrative or dialogue) is given two or three times in succession at an average speed. The students listen WITHOUT CONSULTING THE WRITTEN TEXT. Occasionally, illustrative aids are provided (photographs or drawings) to help them understand the oral text.

- Vocabulary:

  (a) Presentation: the meaning of every new German concept is given (either by illustration, or in the student's mother tongue);

  (b) Re-utilisation: every new lexic unit is then used again in a brief and simple context (a short phrase which the student must repeat ...).

- Entire text is repeated: (again, the students do not consult the written text)

- Text is repeated (in separate units):

  (a) Short sentences: simple repetition of each sentence, after it has been given; each sentence is heard three times; at a given signal, denoting that the unit reading is over, the students stop the tape and repeat the sentence which they have just listened to.

  (b) Long sentences: the text is recreated in successive stages: when it is first spoken, the students hear only the nucleus (or framework) of the sentence; a new element is added to this nucleus with each successive reading; each time the students repeat the new sequence which has just been read. Sometimes, the text is also reconstituted on a progressive line by line basis.

- Entire text is repeated a third time:

  The students listen once more to the entire text (still without consulting the written text) which is now spoken more quickly.

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B. Grammar learning or consolidation phase

- Substitution and transposition exercises.
- Transformation exercises (by combination, expansion or reduction).
- Restatement exercises:
  1. For this set of exercises, the models are taken from the text provided during phase A.
  2. These exercises are designed as follows:
     (a) stimulus (followed by a space for the answer);
     (b) student's answer (limited response-time);
     (c) model answer (provided on tape);
     (d) model answer is repeated (to inculcate what has been learnt)
  3. These exercises progressively test grammatical points.

C. Re-utilisation of lexic material and free expression

- Passive period (evaluation and correction):
  - Evaluation exercise (which enables the students to check if they have properly absorbed new vocabulary); this is a "missing word" exercise: the last word in each of the twenty exercises in the exercise is missing and must be jotted down by the students after listening to each sequence. (Self-correction system.)
  - Identification exercise: the students show by a + (yes) or - (no) if the content of the phrases they hear coincides with that of the text.
- Active period:
  - Questions and answers: (on the text); simple answers (the question content is entirely or partially repeated); answers made up by the students (with the help of words taken from the text); general answers (unconnected with the text itself). (Same framework as given above.)

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- Training students to express themselves freely:
  - ж the students must ask questions for each phrase given;
  - ж general comments: students ask questions about one another, ...

2. Liaison tape

The students record various exercises on this tape:

(a) They read the text;

(b) Exercises (provided in written form) which are similar to those on the study tape; the method adopted consists of "bombarding" the students with questions; the student does not read the phrase which he must modify; this is read to him by a fellow-student;

(c) Free exercises: the students ask questions about the current text or a text, studied during a previous meeting; each student in turn acts as a "target" for his co-students' questions. (For less advanced students, a set of questions is provided.)

This recording is first corrected by the students, then listened to by a teacher.

Results

1. Negative aspects

It would seem that these fall mainly into two categories:

(a) Lack of regular contact with a teacher

In contrast to the traditional type of group, the teacher here is "physically" present only at one out of every five meetings.

(b) Lack of immediate phonetic correction

As the teacher is not present when the students are at work and recording the exercises, it is clear that their phonetic mistakes can only be corrected at a later date (i.e. when the tape itself is corrected).

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2. Positive aspects

(a) On the basis of this method, the time needed by one teacher to supervise eight autonomous groups (approx. 48 students) more or less equals the time needed to teach two traditional groups (24 students); hence the need for more teachers under the latter method.

(b) This method reflects great operational flexibility:

- the students may change the frequency of their meetings;
- the length of the meetings may be varied;
- there is a choice of meeting places;
- there are much greater possibilities for learning and self-expression than in a traditional group (each student has about 20 minutes speaking time during a two hour session);
- there is the stimulating interest of group work and its result: reciprocal education and self-correction;
- the students show a greater degree of initiative and involvement especially as the teacher is not present to induce a ready-made answer; consequently, the work accomplished is by far more significant and interesting.

It should be noted that student attendance in autonomous groups is far more regular than in traditional groups, and that drop-outs are extremely rare during a given year.

For example: an English-language autonomous group at Longwy consisting of four students at the beginning, met 21 times between 6 December 1967 and 14 May 1968 with a total of only four student absences.

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Organisation costs

Comparative prime costs in foreign language teaching

	Traditional Groups	Autonomous Groups
Cost per group		
Teaching hours	54 hrs at 62.88 = 3,391 F	8 hrs* at 62.88 = 505.04 F
Travel (contractual)	0	80.00 F
Corrections	0	880.32 F
Cost of texts and reproduction-secretarial work	32 F	300.00 F
Mailing of literature - pre-paid postage	0	80.00 F
Total	3,423 F	1,845.36 F
Student costs	285 F	307.00 F
Student costs/hr	5.20 F	5.10 F

* For autonomous groups: approx. 60 hrs.annually.

3. A training programme within a company

The aim of this programme, now completed, was to provide training in mathematical statistics for engineers in a large French cement company, to enable them to investigate and analyse problems within this industry on the basis of such methods, and to resolve them with or without the aid of specialists, depending on their degree of complexity. More generally speaking, we wished to provide a "tailor-made" training which would meet their real needs and inject a "probabilist" note into their daily work. It should be remembered that these engineers were to be found in thirteen different factories, which were themselves scattered all over the country.

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In this case, we no longer called in outside specialists, but made use of the company's engineers, already versed in statistics, and who received supplementary training on the material to be taught as well as teacher training, so as to be able afterwards to instruct small groups of their colleagues, working concurrently to acquire additional knowledge and to apply it to resolving their problems.

(1) The orientation programme was implemented at two levels:

(a) Training future teacher-engineers:

- Content (statistics); the selected engineers followed, individually, a basic three months' course, provided by the CUCES and accompanied by numerous exercises; following this course, the engineers gathered together to determine and standardise the training level. The course is one mentioned earlier in this report, i.e. intended for engineers and management personnel.
- Pedagogically, the selected engineers met together to examine the trainee scheme and group teaching methods.

This training was supplemented by the following programme:

(b) The group of teacher-engineers prepared study materials needed to reinforce the programme; these comprised:

- the basic course which has just been mentioned and which was specially reshaped by the nucleus of teacher-engineers. It consisted of ten lessons or chapters;
- a number of exercises for comprehension testing of the various chapters. These exercises were also provided by the CUCES, then reviewed and modified by the engineers;
- a series of examples and exercises taken from the specific industry's experience, prepared by the teacher-engineers and showing concretely how these methods may be used in the daily work of the engineers concerned, as well as training them to investigate, expose and resolve problems connected with their field. A number of complex problems, also prepared by the teachers, enabled the students, moreover, to revise what they had learned every three or four chapters.

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It should be noted that the aim of adapting these methods to meet the particular needs of the company - reflected both in the course and the exercises - was in no way to restrict their scope by giving the content a practical slant; on the contrary, it was intended to enable the students to link what they would learn to what they already know, to the problems with which they are familiar and are facing. Moreover, the CUCES exercises which cover problems arising in every sector of the economy, guarantee to broaden their thinking.

In examining the details of this orientation programme, it should be added that it lasted four months and followed the pattern indicated below:

- A number of discussions were held with management representatives and engineers of the company; these talks brought out some important points concerning implementation of the course and the expectations which it aroused: a first meeting was then arranged for the six future teacher-engineers, the production manager and two CUCES engineers, who were responsible for this programme. All were briefed in advance by having examined the course in statistics (in its unmodified form) and a document outlining the main ideas behind the programme; the meeting had four objectives:
  - . to examine in detail the whole concept of this programme and of the basic course on which it centred;
  - . to review the concept jointly and develop it concretely;
  - . to discuss initial problems arising from this concept;
  - . to study the practical measures needed to launch the programme and to define the functional responsibilities of each group member.
- After this meeting, the engineers of the company had a three months' individual study period, working on the statistics course and the accompanying exercises; they maintained regular contacts with the CUCES to eliminate any serious difficulties which might have slowed down or inhibited their individual progress. (The possibility of a second interim meeting was not excluded, should the need have arisen ... however, this need did not arise).
- An initial two-day seminar was then held enabling the engineers to standardise their knowledge of the basic course, to correct or expand certain obtuse points, and to prepare the various supporting study materials for the first

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chapters to be taught. In addition, the teacher-engineers provided a list of specific problems relating to their industry which were examined jointly and revised by participants.

- A month's recess was devoted to collecting data and restating those problems which had been dissected to illustrate their gradual solution in the course of lessons.

- Finally, the teacher-engineers met again for a one week seminar. This time, discussion centred on the problem of communicating knowledge to the student group; the teacher-engineers contributed a number of theoretical ideas both on teaching methods and on group monitoring; they also reflected on trainee situation attitudes, ways to handle the student groups and held textual discussions. A meeting with management representatives decided how the company's engineers should be informed of the training programme, examined the process of selecting candidates and dividing them into groups as well as possible future extensions to the programme.

  Consequently, from the first instructional year, roughly speaking one out of every two engineers volunteered to take the training course; as the resultant student numbers were too large to handle within a single year, it was decided to offer a consecutive series of such courses, each of one year's duration, and comprising around thirty to thirty-five students, divided into five or six groups of six students each. The fourth training course will have been completed this year.

(2) The teaching process

It is at this stage that "tele-guided" tuition really began, since the teacher-engineers now assumed responsibility for training within the flexible framework which was elaborated with their co-operation.

Supported by a constant appraisal of its progress, this phase lasted approximately one year. All students participating in the first course were divided into small groups, each directed by a teacher-engineer. These groups, scattered all over the country, worked autonomously and at their own tempo of study; all tried, however, to maintain a relatively parallel rate of progress in order to ensure training uniformity within the company.

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A general session was held at the beginning of the programme in order to brief the engineers on the training course and to give them an opportunity to consider jointly the goals behind the course, their individual expectations, the training approach, and the system of evaluation that would be established.

Additionally, a second general session is held at the end of each training phase: this attempts to reach conclusions about the training and to evaluate overall contributions made.

Between these two poles, each group meets periodically - roughly one entire day per month; the remaining time is devoted to individual study.

In other words, each chapter constitutes a "work unit", lasting approximately one month and including two group meetings. Taking into account the variations resulting from the individuality of the different groups, the work of each unit is structured as follows:

We shall take as our point of departure a group meeting, designated session i:

- Session i:

  The previous chapter is worked through and exercises are done on it. The teacher then presents the next chapter (in particular, its salient ideas, subtle points, and its practical significance for the cement industry), and distributes the relevant study materials.

- 3-4 week study period:

  The students work individually at the course and the exercises of this chapter; each course participant may call on the teacher if his study progress is inhibited. Concurrently, each student looks into examples or problems taken from the practice of cement factories which might illustrate this part of the course, and serve as potential points of application for his own work.

- Session i + i:

  The students examine jointly questions raised by each of them on the chapter. The teacher is there to clarify any difficult points.

  The group then works through pertinent exercises on cement factory problems; these exercises both arise from the study materials and are also provided by the group participants themselves. (It is at this point especially that the group's progress is evaluated.)

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The students then set up their own work plan for the ensuing phase; this includes, in particular, data revision and attempts to apply certain principles. The teacher presents the next chapter and distributes the relevant study materials.

In conclusion, it should be noted that the teacher-engineers met periodically throughout this "extension" training phase to discuss any difficulties together, perhaps to amend the way in which the programme was being implemented, bearing in mind the lessons to be drawn from the initial work units, and, finally, to prepare jointly the supporting study materials needed for further phases of the course.

Here too, therefore, their instruction continues on a reciprocal education basis; if necessary, this instruction can be supplemented by another seminar, more comprehensive than the one held at the end of the preparatory phase.

This then is the framework of the training programme which, as already mentioned, has been offered on four successive occasions; each time, the course was taught by a new group of engineers, trained from the second course onwards on the statistical material by teachers from the previous course, and on teaching methods with the help of the CUCES. Naturally improvements have been made to the initial approach; in particular, opinion surveys were introduced before and after the training course. However, this is not the place to go into detail: basically, it may be said that the principle of this experiment, as with the previous two, is to economise on means and produce quick results, to work on the principle of small study groups, and to utilise concurrently special teaching techniques which to some extent resemble programmed instruction, and a method of contact with the "sources of information" which differs from that used in an ordinary correspondence course. Also as in the case of the previous experiments, it presupposes a high intellectual level, possibilities for students to meet and serious study preparation.

However, six key features distinguish this experiment from the others:

- Essentially, it provides "tailor-made" courses, and aims constantly at meeting the specific needs of the engineers, at the same time providing them in fact with the very means of recognising these needs (concrete instruction).
- It rationalises instructor staff, eliminating the use of outside teachers and indeed of instructors ("moniteurs") (an earlier suggestion) and instead making use of real experts, taken from the work environment itself, and trained for this purpose both in form and content.

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- It uses a teaching method, developed together with the teacher-engineers, which to a great extent draws on the most concrete facets of the students' own experience.

- It systematically alternates individual and group study, theory and practice, study of theoretical and actual problems, teacher and student course contributions; it even rotates the trainee phase with a period of return to work in the factory or laboratory, thus allowing the training to be integrated into the daily activity of the individual engineer.

- It constantly evaluates progress, not by examinations and class marks, but in a very concrete manner via the study groups themselves: from the moment that each student becomes aware of problems involving his daily work which arise from statistical methods, and on the basis of techniques proposed for solving these problems, the group is able to appraise its own development and determine the subsequent study phases together with the teacher.

- Finally, it allows teacher-engineers to train, in turn other engineers as instructors; this ensures the continuity and expansion of the programme which becomes in this way progressively less dependent on the body which originally created it.

It should be mentioned that the company has assumed complete responsibility for the fourth training course; the CUCES only offers its aid if this is requested by the teachers, should major problems arise. In addition to providing knowledge and work tools, the course also offers really functional training which the engineers are keen to pursue within the framework of this company-supervised programme of further education and follow-up activity.

4. An experiment using video tape recording

In providing training courses at centres other than Nancy, it is often difficult to find the teachers we need on the spot.

When such instructors are found, we are neither certain of their teaching abilities, nor of the extent to which they can devote the necessary time to preparing and organising a training course.

This situation led us to consider using audio-visual media to mitigate these various drawbacks, and immediately television came to mind.

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Currently, French television regularly offers adult education courses. However, as these courses are supposed to reach the widest possible segment of the population (no particular sector of the public being specified), the result is that their content level remains rather superficial. The requests we have to deal with at our other centres cover more specialised courses and have, therefore, a more limited interest.

In addition to the specific nature of our courses, educational television has two major drawbacks inherent in the limitations of a telecast:

- The television schedules are rigidly fixed. We need a high degree of flexibility in view of the conditions in which we provide courses; we must be able to adapt to the availability of our students, which itself is dictated by the particular working conditions operating in their companies.
- As regards the telecast itself, we cannot imagine a sixty or ninety minute period of instruction for adults, who themselves have no chance of vocally participating. The practice of presenting a thirty or sixty minute televised lesson at one go and excluding the possibility of dialogue seems to us to be contrary to the fundamental pedagogic principles of adult education.

For these various reasons - and because we believe in the value of television both as a means of instruction and of resolving our particular problem, that is, the shortage of qualified teachers - we had to come up with a system which would allow us concurrently to maintain:

- the specialised nature of course content;
- flexible broadcast schedules;
- a dialogue with the adult students.

We selected a system which centres on the video tape recorder ("magnetoscope"). Technically, this type of equipment is now being rapidly developed; its purchase price is constantly improving together with its quality. Costing problems (one video reproducing what has been recorded on another) are in the process of being overcome; this has already been achieved by one range of equipment. Tape editing operations, at one time possible only on very expensive types of video recorder, may now be carried out on much cheaper equipment.

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For a relatively modest investment, one can equip a centre with a video recorder and one or more television receivers. These can pick up studio-televised programmes which they receive on video tape.

With regard to schedules, viewing time is determined on the basis of group availability, so that the system is very flexible.

At Raon l'Etape, a small town near Nancy, we tried an experiment in television-assisted tuition, offering one course on mechanics and one on electricity.

At our Nancy studio we video record the different televised lessons. These video tapes on each subject are sent once a week to Raon.

The students were mostly either chargehands or persons about to enter that work grade. Most of them had not studied either mechanics or electricity previously.

Television is, in fact, only one of the three elements connected with this experience; the others are the teacher and the study materials. Let us pinpoint the function of each element by describing one of the televised study sessions.

Each session is guided by a teacher. He receives a data card which briefs him on the programme content and contains the following information:

- content to be telecast;
- how much time devoted to each element making up the content;
- pauses provided during the telecast for guided group work: discussion, explanation, exercises.

The teacher has several days training on the use of the video recorder and he is responsible for operating it.

The study session itself is carried out as follows: the teacher starts the video recorder and shows the initial televised phase lasting between five and ten minutes: at the end of this sequence, reference is made to the study materials, which inform the course participants of the work they must do. At this stage, the teacher's function is to ensure that the students have correctly understood the sequence they have just seen and to guide the prescribed work.

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When this work is completed, the second televised phase is shown, this procedure continuing for sixty-ninety minutes.

Whilst preparing the tapes, our concern was twofold:

- on the one hand, to present a well-arranged programme content using a maximum of audio-visual aids (film extracts, scale models, stills, charts, etc.);
- on the other hand, to extract the salient ideas from this content and devote a five-ten minute sequence to each one, followed by a study session which can ensure that the material has been properly absorbed.

These tapes were the result of collaboration between a teacher and a production team.

This experiment is now coming to an end and the twenty sequences which make up each course have been telecast. We have not drawn any really scientific conclusions (could one really?); however, an observer was present at each study session, whose remarks resulted in some improvements in programme production - eliminating certain camera movements, modifying the time needed to screen a particular frame..... The following comments are also the results of his observations.

The teacher who, we feared, might be disappointed as he was not responsible for the programme content, adapted very quickly to the role we had assigned to him.

Presentation of content itself improved from session to session. As the students progressed through the course, their study sessions became better planned and organised. As production was no longer left to the teacher alone, but resulted from team work, it became possible to limit if not to prevent the degenerative process to which all teaching is exposed, as is any human activity, as soon as it becomes repetitive and is left in the hands of one individual.

Clearly there was a considerable investment of effort behind the production of these courses.

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Thus, a fifteen minute programme required an average of eight hours preparation.

There are two reasons for this disproportion:

- The technical burden: the teacher responsible for programme production had to reconcile the difficulties inherent in any new medium of expression: camera movements, size of screen, depth of information, teaching rhythm, etc.
- Communication was no longer merely oral (even when using a blackboard), but indeed mainly visual; what one discusses with obvious ease, does not always reflect what is shown on the screen.

This newly developed teaching approach resulted in a systematic reappraisal of programme content.

We do not consider the courses on mechanics and electricity to be flawless in the coming year; nevertheless, the fact that we are over the first stage, that is the video-taping of study programme content, will enable us in this year to work more closely on the audio-visual technique and on oral delivery involving teacher, televised sequence and study materials.

IV. Conclusion

Naturally, the above mentioned programmes represent a great deal of effort; however, we should try to view them vis-à-vis the other possibilities of assisted tuition:

- The simplest method is open circuit television: one just switches on the television set and follows a programme.
- Instruction improves to a certain degree with a "one-way" correspondence course: here, the student merely receives the literature and does the exercises which are provided. This situation can be greatly improved with the aid of programmed tuition.
- Then comes the "two-way" correspondence course, where the student's exercises are returned, corrected and with comments, by the institution. In this case, there is a certain degree of supervision and follow-up for each student; however, there is no living contact.

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- This drawback is remedied by the correspondence course with periodic meetings of students with similar interests. Such meetings may take place at the suggestion of the institution - without any person in the group having a special status - for example during televised study courses to be followed by an exchange of views. However, there is a risk that the results will be poor with persons not accustomed to group study.
- Further improvement of tuition can therefore be achieved by tutors monitoring the groups without having a higher standard of knowledge than the group. Such a tutor might even learn a language together with his group, if the teaching aids are sufficiently developed and he himself is educationally minded enough.
- The tutor may also receive teacher training and may be of a much higher intellectual level than that of his group. If so, he can not only help his students to make progress, but is also able to deal on the spot with any difficulties impeding this progress. This type of group becomes increasingly autonomous, and in this sense, we could designate it the "self-propelled" group.
- Finally, before we come to what may properly be termed a course, that is a group taught only by the teacher himself, the last improvement that can be introduced is the use of an instructor - as in the preceding example - but together with audio-visual equipment, indeed even closed-circuit television with optional telephonic communication during the lesson between the various study groups and the teacher, working within the central establishment. This approach permits the kind of experiment and course presentation which otherwise could not possibly be made available to all the study groups scattered throughout the region.

All that we have discussed deserves to be developed and studied. Our sole aim was to present a few ideas and describe several experiments which are still in their infancy.

We believe that this evolution is not utopian and that it should be relatively easy to move from the traditional correspondence course to the above-described final stage. Instructors can be found. The universities and training centres have the means to provide sufficiently advanced teaching aids which would reduce the importance of the ability gap between

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teacher and students; after all, assisted tuition is no longer so expensive to organise. We feel that the only condition for this evolution is a genuine desire to achieve it which must be present both in student and teacher. We are not seeking to curtail the role of the instructors; on the contrary, this development considerably extends their scope in training which can be carried out using this approach to genuine permanent education. But is it conceivable without the total commitment of all those concerned?

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APPENDIX II

"CENTRE NATIONAL DE TELE-ENSEIGNEMENT" - CNTE
(NATIONAL TELE-EDUCATION CENTRE)

GENERAL INFORMATION

The "Centre National de Télé-Enseignement", a public corporation, (providing courses by correspondence, radio and television) offers free education for children, young people and adults prevented for serious reasons from attending normal teaching institutions.

The CNTE, at Vanves, 60 Boulevard du Lycée, also includes correspondence teaching departments attached to a number of Regional Educational Documentation Centres (external departments of the National Education Institute).

Centre National de Télé-Enseignement (CNTE) (National Tele-Education Centre)	60, bd du Lycée 92 - VANVES Tel: 642 45-50 45-53	CCP (Post Office Savings Account) PARIS 9130-12 opened in the name of M. le Préposé Comptable du CNTE
Services d'enseignement par correspondance des Centres Régionaux de Documentation Pédagogique (CRDP) (departments offering correspondence teaching courses at the Regional Educational Documentation Centres)	3 rue Jean-Bart 59 - LILLE Tel: 57-16-60	CCP LILLE 5703-29 opened in the name of M. l'Agent Comptable du CRDP
	47 rue Philippe-de-Lassalle 69 - LYON (4e) Tel: 29-87-40	CCP LYON 9430-42 opened in the name of M. l'Agent Comptable du CRDP
	3 rue Roquelaine 31 - TOULOUSE Tel: 62-24-15	CCP TOULOUSE 8612-18 opened in the name of M. l'Agent Comptable du CRDP

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The following courses are offered at present:

I. ELEMENTARY EDUCATION

A. Children and adolescents

CRDP - TOULOUSE

- Preparatory course 11th class (6-7 years)
- Elementary course 1st year, 10th class (7-8 years)
- Elementary course 2nd year, 9th class (8-9 years)
- Intermediate course 1st year, 8th class (9-10 years)
- Intermediate course 2nd year, 7th class (10-11 years)
- Advanced course and course leading to the "Certificat d'Etudes Primaires" (primary studies certificate) for bargees and itinerants only.

CRDP - LYON

- Advanced course for pupils anxious to obtain the Certificat d'Etudes who are not yet able to enter the class which prepares them for it.
- Preparatory course for the Certificat d'Etudes Primaires for pupils who will be under 15 years of age on 1 October 1968.
- Elementary Diploma (Brevet élémentaire) giving access in certain cases to a teaching post except in French state teaching establishments. The level required is that of the 3rd class.

B. Adults

CRDP - TOULOUSE

General Education

Stage I - Pupils over 15 years of age

- Preparatory course for adults, introduction to reading, writing and arithmetic.

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Stage II - Pupils over 15 years of age.

- Elementary course for adults.

Stage III - Pupils over 15 years of age.

- Intermediate course for adults (with the possible option of the Certificat d'Etudes).

Stage IV - Pupils over 18 years of age (over 16 years of age for holders of the "CEPE" Certificat d'Etudes primaires élémentaires)

- Observation course for adults (level of 6th and 5th classes).
  This class provides the following options:
  (a) Certificat d'Etudes
  (b) Classical studies (Latin)
  (c) Introduction to industrial draughtsmanship.
  Possibility of studying a modern language (1).

Stage V - Pupils over 18 or having left stage IV.

- Courses for adults (4th and 3rd class level). Preparation for BEPC.
  This class offers different options according to the subjects chosen by the pupil for the BEPC (Brevet d'études du premier cycle)(including Latin)
  Opportunity for studying two modern languages (1).

II. CLASSICAL AND MODERN EDUCATION

CNTE - VANVES

A. - All classes from the 6th to the Baccalauréat, including the 5th repeat class, 4th and 3rd adaptation classes (classics), 6th and 5th transition classes, 4th "classe pratique terminale" (final practical class)

LANGUAGES TAUGHT: English, German, Italian, Spanish (1st, second and third languages), Russian, literary Arabic, Hebrew (second and third languages).

B. - University entrance examination for those not having their Baccalauréat (1 year).

C. - Advanced Mathematics Class

D. - Scientific Reconversion Class.

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(1) Modern languages taught: German, English, Spanish, Italian.

III. TECHNICAL AND VOCATIONAL EDUCATION

A. Commercial Training

CRDP - LYON

- Certificate in shorthand/typing (two or three years)
- Assistant Accountant's Certificate (two or three years)
- Certificate in office administration (options: trade and transport)(two or three years)
- Certificate in Salesmanship (two or three years)
- Insurance Agent's Certificate (two or three years)
- Diploma in Accountancy (one or three years)
- Secretarial Diploma (one or three years)

CNTE - VANVES

- Commercial Teaching Diploma, **options:** secretarial work and accountancy (two years):

  Second Economics (one year)
  First Economics (one year)
- Higher Diploma in Commercial Studies, options: secretarial work and accountancy (one year)
- Baccalauréat for Technicians, options: secretarial work and accountancy (two years)
- Multi-copiers' Certificate for work on punched card machines (three years)
- Diploma for Senior Technicians in Accountancy (two years)
- Diploma for Senior Technicians in Secretarial Work, the option being limited exclusively to secretarial work in managerial departments (two years)
- Diploma for Senior Publicity Expert (in connection with the group of heads of French publicity and the Ecole Supérieure de la Publicité)(two years)

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- Accountancy in collaboration with the "CNAM"
- Entrance examination to "HEC" (advanced commercial studies) for girls (one year)

B. Industrial Education

CNTE - VANVES

- Certificate for cinema projectionists in collaboration with the National Cinema Centre (one year)
- Supplementary certificate for refrigerator fitters (one year)
- Certificate for specialists in electronics (three years)
- Certificate for general mechanics, options: machining and fitting, repairs and maintenance (three years)
- Certificate in electro-technology, option: electro-mechanics (three years)
- Certificate for engineering draughtsmen (two or three years). It is essential to have practical workshop experience to follow this course.
- Diploma for engineering draughtsmen (three years)
- Diploma for refrigeration fitter and repairer (two years)
- Diploma for boiler-makers (three years)
- Diploma for mechanical trades (three years)
- Diploma for electronics specialists (three years)
- Diploma for cinema projectionists (18 months). Courses begin: 1 January every other year (i.e. years ending in uneven figures 1969-71-73 etc.)
- Technical diploma for mechanical work (three years) (second industrial, first industrial and final class)
- Diploma for senior technicians in research departments (three years)

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- Diploma for senior technicians in mechanical trades (three years)

- Diploma for senior technicians in technical-commercial trades connected with metal industries (two years)

C. Social Education

CRDP - LYON

- Certificate for pharmaceutical assistants in collaboration with the General Pharmacists Union which receives enrolments (three years)

- Entrance examination to nursing schools (one or two years)

- Entrance examination to schools preparing social welfare assistants (one year)

IV. TEACHING POSTS AND PREPARATORY COURSES RESTRICTED TO TEACHERS

CNTE - VANVES

A. Temporary primary school teachers

- Teaching diploma (primary school teacher) (course commencing in April)

B. Permanent primary school teachers

- Certificate of domestic science and agricultural studies (CAEM)

- Inspector's Certificate for nursery schools (CAIEM)

- Inspector's Certificate for primary schools: qualifying examination and CAIP (preparation for the qualifying examination commences in May)

- Qualifying certificate for inspectors of technical education (qualifying examination)

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C. "CAPES" [Certificate for teaching posts in secondary education]

- All sections
- Diploma in educational handicrafts and domestic science (certificate of general domestic economy only)
- Diploma in drawing and plastic arts
- Certificate for music and singing, Parts 1 and 2
- Competitive entrance examination to the Claude-Bernard and La Fontaine Lycées
- CAPES (part 2) physical training

D. Competitive examination for entrance to teaching posts at lycées and universities (Agrégation)(all sections)

E. Technical teaching posts

Technical training colleges

* - General teaching posts: arts, sciences (one year)

- Technical and theoretical teaching posts for industrial draughtsmanship. Options: mechanical industry, building (one year)
- Technical theoretical teaching posts for commercial subjects, specialising in: accountancy, secretarial work (one year)
- Technical teaching posts for foremen. Special subjects: engineering trades (options: mechanics, electricity, motor cars, carpentry); building trades (option: carpentry)(one year)(1)
- Assistant technical industrial teaching posts. Specialised subjects: mechanics, motor engineering, electricity, concrete masonry (one year)(1)

* - Assistant teaching posts in the catering trade for competitive subjects (cooking, restaurant, patisserie etc.)(one year)

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* (1) See page 91.

Technical Lycées

* - Qualification for teaching posts in technical lycées - "CAPET"

Section D, parts 1 and 2. Normal and special recruitment (Decree of 25.4.1960.)

Section E

- Assistant technical teaching posts in "ENIAM" (Ecole nationale d'ingenieurs, arts et métiers). Specialised subjects: electronics, electro-technology, methods and mechanical construction studio (one or two years)

- Technical teaching posts. Specialised subjects: electronics, electro-technology, methods and mechanical construction studio (two years)

- Technical teaching posts in the building industry and public works. Specialised subjects: foundations and brickwork, water and drainage facilities and public works; measurements of buildings and estimates of heating and sanitary installations (two years)

* - Technical teaching posts, foremen. Specialised subject: engineering (two years)

- Assistant industrial technical teachers. Specialised subjects: mechanical construction; electrical and automobile engineering; electricity; works studio; masonry (one year)(1)

- Assistant technical teaching posts in commerce (one year)

* - Assistant technical teaching posts in catering subjects for specialised subjects open to competition (cooking, restaurant, pastrycook, etc.) (one year)

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The asterisk means that the course concerned begins on 15 September; all other courses begin at Easter apart from teaching posts in the hotel and catering industry which are planned for November.

(1) For other specialised subjects, candidates receive only a general preparation common to all specialised subjects.

V. GENERAL TRAINING COURSE (three years)

CNTE - VANVES

Conditions of enrolment

- The general training courses (three stages) enable adolescents and adults to round off their general knowledge. The second stage prepares for admission to a preparatory class for the competitive examination for the recruitment of technical assistant industrial teachers. The third stage enables pupils to enter courses for the diplomas of senior technician in the engineering trades, the Commercial Research Department, the classes of the "Conservatoire National des Arts et Métiers" and its associated centres, and courses of the "Centre Interentreprises" for the training of managerial staff. It is essential for enrolment in this class to have reached a level corresponding to that of the second forms in **lycées**.
- Only the basic subjects are taught: grammar, French language, arithmetic, algebra, geometry, physics, chemistry, industrial draughtsmanship in engineering.
- Pupils may enrol either for all the course at one level or only for the study of subjects which concern them more particularly.
- A crash course in a modern language: English, German, Spanish or Italian, may be added to the subjects listed above.
- We should like in particular to stress the fact that the courses progress extremely rapidly and that they are, above all, revision classes, and not introductory classes.

VI. CRASH COURSES IN LANGUAGES

CNTE - VANVES

These are intended for beginners.

A. Teaching at the secondary level

The crash courses in modern languages - English, German, Spanish, Italian - are intended for beginners anxious to reach in two years a level corresponding to that reached in a second modern language at the end of final classes.

There is also a crash course in Latin which enables a pupil to reach in one year the level corresponding to the entrance standard to the second form.

B. Technical Education

Courses are available in English, German, Spanish and Italian and are intended to provide pupils, not only with an adequate knowledge of grammar and the usual vocabulary, but also to provide them with the essential technical vocabulary so as to enable them, after two or three years of study, to read reviews and works dealing with the problems of trade and industry in the original language.

VII. ADMINISTRATIVE STAFF

CRDP - LILLE

A. Competitive recruiting examination for entrance to the general administration and that of universities

- Shorthand/typing (one year)
- Clerk (one or two years)
- Secretary (one year)
- Attaché (one year)
- Administrative advisor (one year)

Requests for information and enrolments should be sent to the CRDP, 3 rue Jean-Bart, Lille.

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B. Competitive recruiting examination for trainee labour inspectors (one year): details may be obtained from the Ministry of Social Affairs, Direction de l'Administration générale, du Personnel et du Budget, Section de la Formation professionnelle, 7 rue de Tilsitt, Paris 17.

C. Internal competitive examinations for the Ministry of the Armed Forces

Administrative Secretary (one year).

General training courses preparing students in one or two years for the competitive examination for clerk (Army, Air Force, Navy). Requests for details and enrolments from: Ministère des Armées, Direction des personnels civils, 9e bureau, 231 boulevard St. Germain, Paris 7.

Internal competitive examinations for the National Military Social Security Office. Administrative Officer, Clerk (one or two years), shorthand/typist. Information and requests for enrolment from: Direction de la Caisse Nationale Militaire de Sécurité Sociale, 4 rue de la Banque, Paris 2.

Entrance examination to the officers training college for the Navy administration (one year). Information and requests for enrolment from: Direction centrale du Commissariat de la Marine, Bureau du personnel, 2 rue Royale, Paris 8.

Entrance examination to the officers training college for the administration of the motor fuel department (one year). Information and requests for enrolment: Direction centrale des Essences des Armées, 51 bis, boulevard de Latour-Maubourg, Paris 7.

CRDP - LYON

"Third Special" class preparing certain administrative competitive examinations, inter alia, examinations for post office and telegraph officials and tax collectors.

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VIII. VARIOUS PREPARATORY COURSES

A. Preparation for various competitive examinations for the Navy: details and requests for enrolments from the Direction du Personnel Militaire de la Marine, 2 Rue Royale, Paris 8.

B. Preparation for a written competitive examination for technical officers in the Army. This preparatory course is restricted to non-commissioned officers: details and requests for enrolment may be obtained from commanding officers.

C. Preparation for various grades and posts in the SNCF: details available from the SNCF, Direction du Personnel, 88 rue Saint-Lazare, Paris 9.

D. Special courses for handicapped persons: introductory courses to reading and writing for severely paralysed persons; requests for details and enrolments may be made to CRDP at Lyon.

All the preparatory courses listed above commence on 15 September (apart from certain cases) and continue during the school year.

ERIC Clearinghouse
APR 6 1970
on Adult Education